

RULEMAKING ISSUE NOTATION VOTE

January 14, 2002

SECY-02-0009

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: DENIAL OF PETITION FOR RULEMAKING (PRM-60-2/60-2A) - THE STATES
OF NEVADA AND MINNESOTA

PURPOSE:

To obtain Commission approval to deny PRM-60-2/60-2A.

BACKGROUND:

In the September 7, 2001, Staff Requirements Memorandum to SECY-01-0127, Draft Final Rule: 10 CFR Part 63, "Disposal of High-Level Radioactive Waste in a Proposed Geologic Repository at Yucca Mountain, Nevada," the Commission directed the staff to publish a Federal Register notice to close out action on the petition for rulemaking PRM-60-2/60-2A, and to inform the affected States.

By letters dated January 30, 1985, and September 30, 1985, the States of Nevada and Minnesota submitted a petition for rulemaking, and a subsequent amendment (PRM-60-2 and PRM-60-2A), requesting that the U. S. Nuclear Regulatory Commission (NRC) amend its regulations governing the implementation of certain generally-applicable environmental standards for high-level radioactive waste (HLW) that had been proposed by the U. S. Environmental Protection Agency (EPA) in 1982. Subsequently, in PRM-60-2A, the petitioners amended their original petition after EPA issued final standards in 1985. PRM-60-2 and 60-2A are provided as Attachments 1 and 2.

Notices of receipt of the petition, and the amendment, were published in the Federal Register on April 30, 1985 (50 FR 18627), and December 19, 1985 (50 FR 51701), respectively, with the

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comment periods ending July 1, 1985, and February 18, 1986. The NRC received eight comment letters on the petition and amendment from seven commenters (one commenter providing comments on both PRM-60-2 and 60-2A). Of the seven commenters, five were from States and two were from representatives of the nuclear power industry. The State commenters supported the petition, whereas the industry commenters opposed it.

In the notice of the amended petition, the NRC noted that rulemaking actions currently underway, when finalized, would address the concerns expressed by petitioners. The actions included proposed amendments to 10 CFR Part 60 to eliminate inconsistencies between NRC's generic regulations and EPA's 1985 standards, and proposed amendments to 10 CFR Part 51 on the adoption of DOE's Final Environmental Impact Statement (FEIS). On July 3, 1989 (54 FR 27864), the NRC published a final rule, "NEPA Review Procedures for Geologic Repositories for High-Level Waste." In that rulemaking, the NRC denied the portion of the amended petition proposing specific regulations to govern the process for adopting DOE's FEIS.

Subsequently, two events occurred which substantially altered the legal landscape of the Government's program for the disposal of HLW. These events resulted in the Commission's withdrawal of its proposed amendments to conform Part 60 to EPA's 1985 standards (63 FR 66498; December 2, 1998). First, in 1987, Congress amended the Nuclear Waste Policy Act of 1982 (NWPA) in the Nuclear Waste Policy Amendments Act (Public Law 100-203), to provide, among other things, that only the site at Yucca Mountain, Nevada, (YM) would be characterized for possible selection as a geologic repository. Second, in the Energy Policy Act of 1992 (Public Law 102-486), Congress required that EPA issue public health and environmental radiation protection standards that would apply solely to the YM site and that NRC modify its technical requirements and criteria to be consistent with the EPA standards. Pursuant to these statutory changes, the EPA issued its final standards applicable to YM in a new 40 CFR Part 197 on June 13, 2001 (66 FR 32074) and the NRC issued its final conforming requirements in a new 10 CFR Part 63 on November 2, 2001 (66 FR 55732). In its rulemaking, the NRC also amended Part 60 to make it clear that this part only applies to the licensing of repositories at sites other than Yucca Mountain.

DISCUSSION:

During development of Part 63, the staff considered the concerns raised by the petitioners and supporting rationale, and public comments. However, the Commission decided not to revise, at this time, the generic regulations dealing with disposal of HLW in 10 CFR Part 60, which is the subject of the amended petition. Therefore, for the reasons set forth in a draft Federal Register notice addressing the petitioner's requested actions (Attachment 3), the staff recommends denial of the petition.

COORDINATION:

The Office of the General Counsel has no legal objection to the denial of this petition.

RECOMMENDATIONS:

That the Commission:

1. Approve the denial of the petition for rulemaking and publication of the Federal Register notice announcing the denial;
2. Inform appropriate Congressional committees; and
3. Note that a letter is attached for the Secretary's signature (Attachment 4), informing the petitioners of the Commission's decision to deny the petition.

/RA/

William D. Travers
Executive Director
for Operations

Attachments:

1. Petition from States of Nevada and Minnesota (PRM-60-2)
2. Amended petition from States of Nevada and Minnesota (PRM-60-2A)
3. Federal Register Notice
4. Letter to the Petitioner

Jway

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OF COUNSEL:
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Please reply to: Olympia

January 22, 1985

PRM-60-2

Mr. Samuel J. Chilk
Secretary
Nuclear Regulatory Commission
Room 1135
Matomic Building
1717 H Street Northwest
Washington, D.C. 20555

Attention: Chief, Docketing and Service Branch

Re: Petition for Rulemaking

Dear Mr. Chilk:

Enclosed is the original and one copy of the Petition of the States of Nevada and Minnesota for the adoption of a new regulation for the implementation of 40 CFR 191. This Petition is submitted in accordance with 10 CFR 2.802.

Please notify me of the docket number which has been assigned to this Petition by conforming the copy enclosed with the filed original and returning it to me.

Sincerely,

DURYEA, HOUCHINS,
MURPHY & DAVENPORT

James H. Davenport
James H. Davenport

JHD:tjl
Enclosure

cc: Chairman Nunzio Palladino
Commissioner James K. Asselstine
Commissioner Fredrich M. Bernthal
Commissioner Thomas M. Roberts
Commissioner Lando W. Zech Jr.
Mr. Sheldon Trubatch

Mr. Lee Thomas
Mr. Sheldon Myers
Mr. Robert Loux
Ms. Jocelyn F. Olson
Mr. William Olmstad ✓

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSIONERS

In the matter of)
the Petition of the)
States of Nevada and Minnesota)
for the Adoption of a)
New Regulation for the)
Implementation of 40 C.F.R. 191.)
_____)

DOCKET NO. _____

PETITION TO INSTITUTE RULEMAKING

The States of Nevada and Minnesota, Petitioner, hereby respectfully requests and petitions the Nuclear Regulatory Commission, NRC, pursuant to 5 U.S.C § 553 and 10 C.F.R. §§ 2.800-2.804, to exercise its rulemaking authority and adopt a regulation governing the implementation of proposed 40 C.F.R. 191 by the Nuclear Regulatory Commission.

I. Text of Proposed Rules.

A. Assurance Requirements.

To provide the confidence needed for compliance with the Environmental Protection Agency's generally applicable Environmental Standards for the management and disposal of spent nuclear fuel and high-level and transuranic radioactive waste, 40 C.F.R. 191.13, the Commission shall determine the compliance of any proposal of the Department of Energy for a construction authorization for the development of a high-level nuclear waste repository with those standards through application of the following:

1 (a) Active institutional controls over disposal sites should be maintained
2 for as long a period of time as is reasonable after disposal; however, isolation of
3 the wastes from the environment shall not rely upon any of the active controls
4 for more than 100 years after disposal.

5 (b) During the period that active controls are maintained, disposal site
6 shall be monitored to detect any substantial and detrimental deviations from
7 expected performance. This monitoring shall be done with techniques that do
8 not jeopardize the isolation of the wastes.

9 (c) Disposal sites shall be designated by the most permanent markers and
10 records practicable to indicate the dangers of the wastes and their location.

11 (d) Disposal systems shall use several different types of barriers to
12 isolate the wastes from the environment. Both engineered and natural barriers
13 shall be included. Each barrier shall be designed or selected so that it
14 complements the others and can significantly compensate for uncertainties about
15 the performance of one or more of the other barriers.

16 (e) When selecting high-level radioactive waste repository sites from
17 among alternatives considered in detail (e.g., from among those characterized in
18 accordance with the Nuclear Waste Policy Act of 1982), one of the significant
19 considerations shall be selection of sites that have natural properties that are
20 expected to provide better isolation of the wastes from the accessible environ-
21 ment for 100,000 years after disposal. Analyses used to compare the capabilities
22 of different sites to isolate wastes (with regard to this provision only) shall be
23 based upon the following: (1) only the undisturbed performance of the disposal
24 system should be considered; (2) the performance of the waste packages and
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1 waste forms planned for the disposal system shall be assumed to be the same
2 from site to site and shall be assumed to be at least an order of magnitude less
3 effective than the performance required by 10 CFR 60.113; and (3) no credit
4 shall be taken for other engineering controls intended to correct preexisting
5 natural flaws in the geologic media (e.g., grouting of fissures should not be
6 assumed, but effective sealing of the shafts needed to construct the repository
7 should be assumed).

8 (f) Places where there has been mining for resources, or where there is a
9 reasonable expectation of exploration for scarce or easily accessible resources,
10 or where there is a significant concentration of any material that is not widely
11 available from other sources, should be avoided in selecting disposal sites. Such
12 places shall not be used for disposal of the wastes covered by this Part unless the
13 favorable characteristics of such places more than compensate for their greater
14 likelihood of being disturbed in the future.

15 (g) Disposal systems should be selected so that removal of most of the
16 wastes is not precluded for a reasonable period of time after disposal.

17 (h) Disposal systems shall be selected and designed to keep releases to
18 the accessible environment as small as reasonably achievable, taking into
19 account technical social and economic considerations.

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21 B. Commission Findings.

22 The rules promulgated herein were originally proposed by the Environmen-
23 tal Protection Agency for inclusion in 40 C.F.R. 191 on December 29, 1982 57
24 C.F.R. 58196 pursuant to § 121(a) of the Nuclear Waste Policy Act, 42 U.S.C.

1 10141, the Atomic Energy Act of 1954, as amended, and the President's
2 Reorganization Plan No. 3 of 1970. Significant public comment was received by
3 the Environmental Protection Agency pursuant thereto. Such comment has been
4 reduced to written record which the Nuclear Regulatory Commission has
5 reviewed for substantive content. Also, response to such comment had been
6 incorporated by the Environmental Protection agency in its latest draft version
7 of the rule with amendment herein promulgated.

8 The President must recommend a first high-level nuclear waste repository
9 location to Congress by March 31, 1987 (§ 114(a)(2)(A), 42 U.S.C. 10134(a)(2)(A))
10 or March 31, 1988 if he determines an extension necessary (§ 114(a)(2)(B), 42
11 U.S.C. 10134(a)(2)(B)). The Nuclear Regulatory Commission must act upon an
12 application for construction authorization for that repository by January 1, 1989
13 or within 3 years of the application's filing (§ 114(d)(1), (2), 42 U.S.C 10134(d)(1),
14 (2)). The President's recommendation must be based upon Department of Energy
15 site characterization at a site which must have been recommended by January 1,
16 1985 (§ 112(b)(1)(D), 42 U.S.C. 10133(b)(1)(D)). Site characterization must be
17 performed pursuant to a plan reviewed by the Commission and the affected state
18 (§ 113(b)(1), 42 U.S.C. 10133(b)(1)) before characterization begins. That plan
19 must include criteria to be used by DOE to determine the "suitability of such
20 candidate site for the location of a repository, developed pursuant to § 112(a);"
21 (§ 113(b)(1)(A)(iv), 42 U.S.C. 10133(b)(1)(A)(iv)). DOE's § 112(a) guidelines, as
22 concurred in by the Commission on June 22, 1984, 49 F.R. 28130, require that
23 evidence used to apply those guidelines include "analysis of expected repository
24 performance to assess the likelihood of demonstrating compliance with 40 C.F.R.
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1 191 and 10 C.F.R. 60" Proposed 10 C.F.R. 960.3-1-5. The Commission
2 finds, therefore, that the rule herein enacted must be in place in order that the
3 Department of Energy may design its site characterization plan, for approval by
4 the Nuclear Regulatory Commission, in a manner consistent with its final
5 guidelines.

6 The Commission also finds that, as a matter of the legal requirements of
7 the Nuclear Waste Policy Act, the EPA's standards required by § 121(a) of the
8 Act must be final before environmental assessments prepared by DOE pursuant
9 to § 112(b)(1)(E) of the Act can be finally published and before DOE may
10 nominate a site or recommend a site for characterization pursuant to
11 § 112(b)(1)(A) and (B) of the Act.

12
13 C. 42 U.S.C. 2239(a)(2)(A).

14 The Commission finds that the rule promulgated herein does not amend any
15 operating license currently in effect.

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17 II. Grounds and Interest.

18 Petitioner State of Nevada files this rulemaking Petition as a state
19 notified, pursuant to § 116(a) of the Nuclear Waste Policy Act, 42 U.S.C
20 10136(a), that a potentially acceptable site for a repository has been identified
21 within the state. The Draft Environmental Assessment of the Yucca Mountain
22 Site, Nevada Research and Development Area, Nevada, published on December
23 20, 1984, indicates that the Yucca Mountain site may be nominated under
24 § 112(b)(1)(A) of the Act and may be recommended for characterization under
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1 § 112(b)(1)(B) of the Act. The State of Nevada may become affected for
2 purposes of participation in site characterization, pursuant to § 113 of the Act.
3 Nevada has an interest in, and the prevailing responsibility for, the protection of
4 the future health and safety of the citizens of the State of Nevada.

5 Petitioner State of Minnesota joins this Petition as a state informed by the
6 Department of Energy that, due to the presence of crystalline rock within its
7 borders, the State is being considered for site characterization for a second
8 repository. As a potentially acceptable state the State of Minnesota may be
9 directly affected by the substance of standards for development of repositories.
10 Minnesota has an interest in, and the prevailing responsibility for the protection
11 of the future health and safety of the citizens of the State of Minnesota.

12 13 III. Statement in Support.

14 The Nuclear Waste Policy Act was enacted by the Congress on December
15 20, 1982 and approved by the President on January 7, 1983. Section 121(a) of the
16 Act, 42 U.S.C. 10141(a), required the Environmental Protection Agency to
17 promulgate by rule, not later than one year after the date of the enactment of
18 the Act, or January 7, 1984, "generally applicable standards for protection of the
19 general environment from offsite releases from radioactive material in reposi-
20 tories." Pursuant to its view of that requirement and its general authority under
21 the Atomic Energy Act and the President's Reorganization Plan of 1970, the
22 Environmental Protection Agency published proposed "Environmental Standards
23 for the Management and Disposal of Spent Nuclear Fuel, High-Level and
24 Transuranic Radioactive Wastes" on December 29, 1982 (47 F.R. 58196). Those

1 proposed standards include Containment Requirement (proposed 40 C.F.R.
2 191.13), Assurance Requirements (proposed 40 C.F.R. 191.14) and Guidance for
3 Implementation (proposed 40 C.F.R. 191.16).

4 The Environmental Protection Agency received significant written
5 comment and conducted public hearings on the proposed standards. The entire
6 record of the rulemaking is contained within Environmental Protection Agency
7 Docket No. R 82-3 and is available for inspection in the West Tower Lobby,
8 Gallery One, Central Docket Section, 401 M Street Southeast, Washington, D.C.

9 In 1983, early in the process of notice and comment on EPA's proposed 40
10 C.F.R. 191, objections were raised regarding the authority of the Environmental
11 Protection Agency to promulgate that portion of its proposed rules contained in
12 proposed 40 C.F.R. 191.14, entitled "Assurance Requirements." These objections
13 were based on the legal argument that § 121(a) of the Nuclear Waste Policy Act,
14 42 U.S.C. 10141(a), specifically clarifies that EPA's authority to promulgate the
15 proposed rules arises "under other provisions of law." Those "other provisions of
16 law" include the Atomic Energy Act of 1954 as amended, 20 U.S.C. 2021(h), and
17 the President's Reorganization Plan No. 3 of 1970. The essence of the objection
18 was that the President's Reorganization Plan No. 3 of 1970 placed within the
19 Federal Radiation Council, now no longer in existence, rather than the Environ-
20 mental Protection Agency, the authority for such requirements as contained
21 within the proposed 40 C.F.R. 191.14.

22 On May 21, 1984, the Environmental Protection Agency published Working
23 Draft No. 4-Final 40 C.F.R. 191-5/21/84, the proposed environmental standards,
24 for review within EPA and other federal agencies.

1 Even though the Environmental Protection Agency's statutory deadline for
2 promulgation of the standards is past, the Environmental Protection Agency has
3 not finalized 40 C.F.R. 191 as required by § 112(a) of the Nuclear Waste Policy
4 Act. The primary reason for that failure is the jurisdictional issue of the
5 Environmental Protection Agency's authority to promulgate requirements of the
6 nature contained in proposed 40 C.F.R. 191.14.

7 Even though Congress recognized, in § 121(a) of the Nuclear Waste Policy
8 Act, 42 U.S.C. 10141(a), that EPA's authority to promulgate the standards
9 existed "pursuant to authority under other provisions of law," Congress clearly
10 believed that such other authority included the authority to promulgate
11 "generally applicable standards for protection of the general environment from
12 offsite releases of radioactive material and repositories." Proposed 40 C.F.R.
13 191.14, Assurance Requirements, are clearly such "generally applicable
14 standards." To the extent that 20 U.S.C. 2021(h) or the President's Reorganiza-
15 tion Plan No. 3 of 1970 have an alternate legal meaning, it would seem that
16 § 121(a) prevails over that earlier law and contains the necessary EPA authority.

17 Because proposed 40 C.F.R. 191.14 contains generally applicable standards
18 for the protection of the general environment from offsite releases from
19 radioactive materials in repositories, the Environmental Protection Agency
20 should proceed to finalize 40 C.F.R. 191. However, dispute as to the question of
21 authority continues to preclude that from happening. (Fortunately, the general
22 authority of the Nuclear Regulatory Commission to protect the health and safety
23 of the public against radiation hazards under the Atomic Energy Act endows the
24 Commission with the power to enact regulations of the nature contained in
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1 proposed 40 C.F.R. 191.14 notwithstanding EPA's authority. Inasmuch as no
2 objections have been raised to the substance of proposed 40 C.F.R 191.14, and
3 because the proposed rule does provide confidence that the requirements of
4 proposed 40 C.F.R. 191.13 would be met by a repository, the NRC should enact
5 the proposed regulation under its own authority, thereby totally removing the
6 jurisdictional issue as an impediment to EPA's promulgation of the proposed
7 section. When that impediment is removed, the Environmental Protection
8 Agency could move to final adoption of its rule.

9 It is important that the EPA finalize its § 121(a) standards. Those
10 standards are the performance criteria against which a repository host media
11 must be selected and a repository engineered. Site characterization is the
12 process by which DOE will fully evaluate and project whether EPA standards can
13 be met at a particular location. DOE's site characterization plan required by
14 § 113(b) of the Act establishes the DOE's method of performing that evaluation
15 and prediction. It would not be possible for DOE to draft that plan nor for the
16 Commission to review that plan, as impliedly required by § 113(b)(1)(A)(v) and
17 (c)(2)(A) of the Act, if EPA's standards were not yet final. (See also 10 C.F.R.
18 60.11(b)-(g) and SECY-84-263.) DOE could certainly not make nomination
19 decisions required by § 112(b)(1)(A) or recommendations for characterization
20 required by § 112(b)(1)(B) if no final EPA standard is in existence against which
21 to compare the relative merits of respective sites. This logic is confirmed by
22 the fact that § 121(a) requires EPA standards be final a full year before the date
23 by which § 112(b)(1)(B) requires that the first three sites be recommended for
24 characterization.
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IV. Prayer.

Petitioners pray the Nuclear Regulatory Commission to adopt a regulation governing the implementation of proposed 40 C.F.R. 191 as proposed in Section I of this Petition.

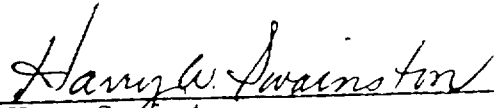
Dated this 21st day of January, 1985.

by:
STATE OF NEVADA

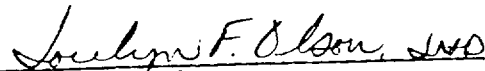
STATE OF MINNESOTA

Honorable Brian McKay,
Attorney General
State of Nevada
Heroes Memorial Bldg.
Carson City, Nevada 89710

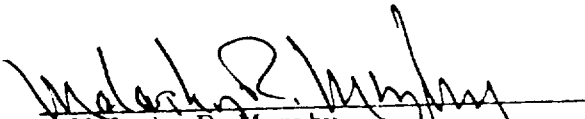
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Attorney General of
State of Minnesota
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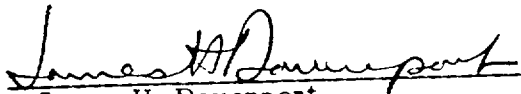
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSIONERS

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In the matter of)
the Petition of the)
States of Nevada and)
Minnesota for the adoption)
of an amendment to)
10 C.F.R. Part 60)

DOCKET NO. PRM 60-2
AMENDED PETITION

The States of Nevada and Minnesota hereby amend their Petition to Institute Rulemaking, submitted herein, pursuant to 5 U.S.C. Section 553 and 10 C.F.R. Section 2.800-2.809, on January 21, 1985. This amendment is based on the intervening action of the Environmental Protection Agency (EPA) on August 15, 1985 in which the EPA issued final standards for protection of the general environment from offsite releases from radioactive material in repositories.

I. Proposed Rules

A. Amend 10 C.F.R. Part 60 as follows:

1. Add definitions to Section 60.2:

() "Active institutional control" means any measure other than a passive institutional control performed to: (1) control access to a site, (2) perform maintenance operations or remedial actions at a site, (3) control or clean up releases from a site, or (4) monitor

AMENDED PETITION

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Handwritten notes and signatures:
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1 parameters related to geologic repository performance and compliance
2 with standards limiting releases of radioactivity to the accessible
3 environment.

4 () "Passive institutional control" means: (1) permanent
5 markers placed at a site, (2) public records and archives,
6 (3) government ownership and regulations regarding land or resource
7 use, and (4) other methods of preserving knowledge about the location,
8 design, and the contents of a geologic repository.

9 2. Add to Section 60.21(c) "Content of [license] application"
10 and renumber remaining sections:

11 (9) A general description of the program for post-permanent
12 closure monitoring of the geologic repository.

13
14 3. Add a new Section 60.24(c), (d) and reletter the remaining
15 subsection as (e).

16 (c) The Commission shall evaluate the environmental impact
17 statement required by 42 U.S.C. 10134(f) and 10 C.F.R. 60.21(a) to
18 determine whether its adoption by the Commission would not compromise
19 the independent responsibilities of the Commission to protect the
20 public health and safety under the Atomic Energy Act of 1954 (42
21 U.S.C. 2011, et. seq.,). In making such a determination, the
22 Commission shall consider:

1 (1) whether the Department of Energy has complied with the
2 procedures and requirements of the Nuclear Waste Policy Act (42 U.S.C.
3 10101 et. seq.).

4 (2) whether the alternative sites proposed in the environmental
5 impact statement are bona fide alternative sites; that site
6 characterization under 42 U.S.C. 10133 has been completed at such
7 sites; and that the Secretary, after site characterization is
8 complete, or substantially complete, at such sites, has made a
9 preliminary determination that such sites are suitable for development
10 as repositories consistent with the guidelines promulgated pursuant to
11 42 U.S.C. 10132.

12 (3) whether the consideration of the alternative sites considered
13 in the environmental impact statement included consideration of the
14 natural properties that are expected to provide better isolation of
15 the wastes from the accessible environment for 10,000 years after
16 disposal; and whether the analyses used by the Department of Energy to
17 compare the capabilities of different sites to isolate wastes were
18 based upon the following:

19 (i) only the undisturbed performance of the disposal system has
20 been considered;

21 (ii) the performance of the waste packages and waste forms
22 planned for the disposal system was assumed to be the same from site
23 to site and assumed to be at least an order of magnitude less
24 effective than the performance required by 10 C.F.R. 60.113; and
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1 (iii) no credit was taken for other engineering controls intended
2 to correct preexisting natural flaws in the geologic media (e.g.,
3 grouting of fissures shall not be assumed, but effective sealing of
4 the shafts needed to construct the repository shall be assumed).

5 (4) whether the disposal systems considered, selected or designed
6 will keep releases to the accessible environment as low as reasonably
7 achievable, taking into account technical, social and economic
8 considerations.

9 (d) If the Commission determines that adoption of the
10 environmental impact statement would compromise the independent
11 responsibilities of the Commission, then the Commission shall consider
12 fully the environmental impact of the selection of the proposed site
13 as required by 42 U.S.C. 4321, et. seq.

14 4. Revise Section 60.51(a)(1) "License amendment for permanent
15 closure" as follows:

16 (1) A detailed description of the program for post-permanent
17 closure monitoring of the geologic repository in accordance with
18 60.144. As a minimum, this description shall:

19 (A) identify those parameters that will be monitored;

20 (B) indicate how each parameter will be used to evaluate
21 the expected performance of the repository;

22 (C) describe those monitoring devices which will
23 indicate the likelihood that standards limiting releases of
24 radioactivity to the accessible environment may not be met.

1 (D) discuss the length of time over which each parameter
2 should be monitored to adequately confirm the expected performance of
3 the repository;

4 (E) indicate how the results of post-permanent closure
5 monitoring will be shared with affected State, Indian tribal and local
6 governments.

7 (5) Add a new subsection to Section 60.52(c) "Termination of
8 license" and renumber current Section 60.52(c)(3) as 60.52(c)(4).

9 (3) That the results available from the post-permanent closure
10 monitoring program confirm the expectation that the repository will
11 comply with the performance objectives set out at Sections 60.112 and
12 60.113.

13 6. Modify Section 60.113 by adding:

14 (d) In any event, however, and notwithstanding the provisions of
15 (b) above, the geologic repository shall incorporate a system of
16 multiple barriers, both engineered and natural, each designed or
17 selected so that it complements the others and can significantly
18 compensate for uncertainties about the performance of one or more of
19 the other barriers. 'Barrier' means any material or structure that
20 prevents or substantially delays movement of water or radionuclides.

21
22 7. Add a new Section 60.114 "Institutional Controls":

23 Neither active nor passive institutional controls shall be deemed
24 to assure compliance with the overall performance objective set out at
25

1 Section 60.112 for more than 100 years after disposal. However, the
2 effects of passive institutional controls may be considered in
3 assessing the likelihood and consequences of processes and events
4 affecting the geologic setting.

5 8. Add a new Section 60.122(c)(18) and renumber later sections:

6 (18) The presence of significant concentrations of any naturally-
7 occurring material that is not widely available from other sources.

8 9. Add a new Section 60.144 "Post-Permanent Closure Monitoring":

9 A program of post-permanent closure monitoring shall be conducted
10 and shall provide for monitoring of all repository characteristics
11 which can reasonably be expected to provide substantive confirmatory
12 information regarding long-term repository performance, provided that
13 the means for conducting such monitoring will not degrade repository
14 performance. This program shall be continued until termination of a
15 license which shall not occur until the Commission is convinced that
16 there is no significant concern which could be addressed by further
17 monitoring.

18
19 B. Commission Findings.

20 The essential substance of the rules promulgated herein was
21 originally proposed by the Environmental Protection Agency for
22 inclusion in 40 C.F.R. 191 on December 29, 1982, 57 F.R. 58196,
23 pursuant to Section 121(a) of the Nuclear Waste Policy Act, 42 U.S.C.
24 10141, the Atomic Energy Act of 1954, as amended, and the President's
25

1 Reorganization Plan No. 3 of 1970. Significant public comment was
2 received by the Environmental Protection Agency pursuant thereto.
3 Such comment has been reduced to written record which the Nuclear
4 Regulatory Commission has reviewed for substantive content. Response
5 to such comment has been incorporated by the Environmental Protection
6 Agency in its final version of the rule issued on August 15, 1985, 50
7 F.R. 38065.

8 During the pendency of the EPA rulemaking, significant
9 interaction occurred between Commission and EPA staff regarding which
10 was the proper agency to adopt rules in the nature of "assurance
11 requirements" which would apply to Commission licensees, to insure
12 against the inherent uncertainties in selecting, designing and
13 licensing waste disposal systems that must be very effective for more
14 than 10,000 years. The two agencies agreed informally, and the EPA
15 standard as finally issued provides, that assurance requirements are
16 an appropriate mechanism to better guarantee that numerical standards
17 will be realized; that the NRC was the more appropriate agency to
18 adopt such standards as they apply to NRC licensees; and that the NRC
19 approach would be to integrate the essence of EPA's earlier proposed
20 rules into the repository licensing provisions of 10 C.F.R. 60. The
21 Commission finds that the adopted rules realize those objectives.

22 The President must recommend a first high-level nuclear waste
23 repository location to Congress by March 31, 1987 (Section
24 114(a)(2)(A), 42 U.S.C. 10134(a)(2)(A)) or March 31, 1988 if he
25

determines an extension necessary (Section 114(a)(2)(B), NWA 42
1 U.S.C. 10134(a)(2)(B)). The Nuclear Regulatory Commission must act
2 upon an application for construction authorization for that repository
3 by January 1, 1989, or within 3 years of the application's filing
4 (Section 114(d)(1), (2), 42 U.S.C. 10134(d)(1), (2)). The President's
5 recommendation must be based upon Department of Energy site
6 characterization at a site which must have been recommended by January
7 1, 1985 (Section 112(b)(1)(D), 42 U.S.C. 10133(b)(1)(D)). Site
8 characterization must be performed pursuant to a plan reviewed by the
9 Commission and the affected state (Section 113(b)(1), 42 U.S.C.
10 10133(b)(1)) before characterization begins. That plan must include
11 criteria to be used by DOE to determine the "suitability of such
12 candidate site for the location of a repository, developed pursuant to
13 Section 112(a);" (Section 113(b)(1)(A)(iv), 42 U.S.C.
14 10133(b)(1)(A)(iv)). DOE's Section 112(a) guidelines, as concurred in
15 by the Commission on June 22, 1984, 49 F.R. 28130, require that
16 evidence used to apply those guidelines include "analysis of expected
17 repository performance to assess the likelihood of demonstrating
18 compliance with 40 C.F.R. 191 and 10 C.F.R. 60" 10 C.F.R.
19 960.3-1-5. The Commission finds, therefore, that the rule herein
20 adopted must be in place in order that the Department of Energy may
21 design its site characterization plan in a manner consistent with its
22 final guidelines.

C. 42 U.S.C. 2239(a)(2)(A).

1 The Commission finds that the rule promulgated herein does not
2 amend any operating license currently in effect.

3
4 II. Grounds and Interest.

5
6 Petitioner State of Nevada files this amended rulemaking Petition
7 as a state notified, pursuant to Section 116(a) of the Nuclear Waste
8 Policy Act, 42 U.S.C. 10136(a), that a potentially acceptable site for
9 a repository has been identified within the state. The Draft
10 Environmental Assessment of the Yucca Mountain Site, Nevada Research
11 and Development Area, Nevada, published on December 20, 1984,
12 indicates that the Yucca Mountain site may be nominated under Section
13 112(b)(1)(A) of the Act and may be recommended for characterization
14 under Section 112(b)(1)(B) of the Act. The State of Nevada may become
15 affected for purposes of participation in site characterization,
16 pursuant to Section 113 of the Act. Nevada has an interest in, and
17 the prevailing responsibility for, the protection of the future health
18 and safety of the citizens of the State of Nevada.

19 Petitioner State of Minnesota joins this amended Petition as a
20 state informed by the Department of Energy that, due to the presence
21 of crystalline rock within its borders, the State is being considered
22 for site characterization for a second repository. As a potentially
23 acceptable state, the State of Minnesota may be directly affected by
24 the substance of standards for development of repositories. Minnesota

1 has an interest in, and the prevailing responsibility for the
2 protection of the future health and safety of the citizens of the
3 State of Minnesota.

4 III. Statement in Support.

5 The Nuclear Waste Policy Act was enacted by the Congress on
6 December 20, 1982 and approved by the President on January 7, 1983.
7 Section 121(a) of the Act, 42 U.S.C. 10141(a), required the
8 Environmental Protection Agency to promulgate by rule, not later than
9 one year after the date of the enactment of the Act, or January 7,
10 1984, "generally applicable standards for protection of the general
11 environment from offsite releases from radioactive material in
12 repositories." Pursuant to its view of that requirement and its
13 general authority under the Atomic Energy Act and the President's
14 Reorganization Plan of 1970, the Environmental Protection Agency
15 published proposed "Environmental Standards for the Management and
16 Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive
17 Wastes" on December 29, 1982 (47 F.R. 58196). Those proposed
18 standards include Containment Requirements (proposed 40 C.F.R.
19 191.13), Assurance Requirements (proposed 40 C.F.R. 191.14) and
20 Guidance for Implementation (proposed 40 C.F.R. 191.16).

21 The Environmental Protection Agency received significant written
22 comment and conducted public hearings on the proposed standards. The
23 entire record of the rulemaking is contained within Environmental
24 Protection Agency Docket No. R 8203 and is available for inspection in
25

1 the West Tower Lobby, Gallery One, Central Docket Section, 401 M
2 Street Southeast, Washington, D.C.

3 In 1983, early in the process of notice and comment on EPA's
4 proposed 40 C.F.R. 191, objections were raised regarding the authority
5 of the Environmental Protection Agency to promulgate that portion of
6 its proposed rules contained in proposed 40 C.F.R. 191.14, entitled
7 "Assurance Requirements." The objections were based on the legal
8 argument that Section 121(a) of the Nuclear Waste Policy Act, 42
9 U.S.C. 10141(a), specifically states that EPA's authority to
10 promulgate the proposed rules arises "under other provisions of law."
11 Those "other provisions of law" include the Atomic Energy Act of 1954
12 as amended, 20 U.S.C. 2021(h), and the President's Reorganization Plan
13 No. 3 of 1970, which placed within the Federal Radiation Council, now
14 no longer in existence, rather than the Environmental Protection
15 Agency, the authority for such requirements as contained within the
16 proposed 40 C.F.R. 191.14.

17 The States of Nevada and Minnesota filed the original Petition in
18 this matter on January 21, 1985, in an effort to catalyze resolution
19 of the apparent disagreement between the NRC and EPA regarding the
20 appropriate agency to adopt the substantive rule which Nevada and
21 Minnesota desire. The Commission docketed the Petition, 50 F.R.
22 18267, and requested comments thereon. Six comments were received and
23 the comment period was closed on July 1, 1985. No action has yet been
24 proposed.

1 On August 15, 1985, pursuant to a stipulated Consent Order in
2 NRDC v. Thomas, (D.C., D.C., 85-0518), EPA issued final standards
3 limiting offsite releases of radioactivity from repositories, 50 F.R.
4 38065. Though "assurance requirements" were included therein, 40
5 C.F.R. 191.14, those assurance requirements do not apply to NRC
6 licensees, to wit: the Department of Energy. It is therefore
7 mandatory that NRC amend its repository licensing regulations to
8 incorporate the equivalent substance of EPA standards.

9 The rules proposed here are those which EPA staff and NRC staff
10 recognized as substantively equivalent to the EPA assurance
11 requirements with one very notable exception: proposed 10 C.F.R.
12 60.24(c). That proposed rule relates to NRC review and adoption of
13 DOE's environmental impact statement, a document developed in DOE's
14 selection of a repository site. EPA's proposed 40 C.F.R. 191.14(e)
15 dealt with site selection, as NRC staff recognized in comments
16 published by EPA in "Background Paper: Potential Changes in 10 C.F.R.
17 60 to Replace Assurance Requirements in 40 C.F.R. 191, March 21,
18 1985". NRC staff, however, found that DOE's site selection
19 guidelines, 10 C.F.R. 960.3-1-5, adequately address this issue.
20 Nevada and Minnesota are concerned and the Commission should also be,
21 that DOE's site selection process may not produce bona fide
22 alternatives for consideration in DOE's EIS because of DOE's current
23 interpretation of Section 114(f), 42 U.S.C. 10134(f). If it does not,
24 NRC's "independent responsibilities . . . to protect the public health
25 and safety under the Atomic Energy Act of 1954" (Section 114(f), 42

1 U.S.C. 10134(f)) will be implicated. The National Environmental
2 Policy Act, 42 U.S.C. 4321, et seq, together with the Atomic Energy
3 Act of 1954, as amended, 42 U.S.C. 2011, et seq, require the
4 Commission to consider bona fide alternatives, even if Section 112 of
5 the Nuclear Waste Policy Act, 42 U.S.C. 10132, does not require DOE to
6 do so. The rule which is proposed here would guarantee that bona fide
7 alternatives were evaluated by the NRC, if not also DOE. The "low as
8 reasonably achievable" releases concept has also been reintroduced in
9 this context. The bases for DOE's consideration of natural properties
10 expected to provide better isolation have also been reintroduced.

11 In adopting the language of Section 114(f) of the NWPA, Congress
12 did not change the requirement for consideration of bona fide
13 alternatives in an EIS. It merely narrowed the universe of all
14 alternatives which DOE must consider in the final EIS, from all sites
15 reasonably available to only those three sites which had been
16 characterized, and for which the Secretary had made a preliminary
17 determination as to site suitability. A site which the Secretary has
18 determined to be unsuitable for development as a repository, or,
19 conversely, at which the Secretary was unable to make a preliminary
20 determination of suitability, is simply not an alternative. Thus the
21 Secretary's responsibilities, under either the NWPA or NEPA, to
22 consider alternative sites, is simply not met by the consideration of
23 three sites, one or two of which were determined at any time to be
24 unsuitable for development as repositories. Neither would the

Commission's responsibilities be carried out in such a case, and thus
1 such a result would severely jeopardize the Commission's ability,
2 under Section 114(f), to adopt the Secretary's final EIS in order to
3 meet the Commission's legal obligations under NEPA.

4 For further comments in support of the proposed 10 C.F.R.
5 60.24(c), (d) the Commission is referred to the remarks of the State
6 of Nevada with respect to Section 114(f) of the Nuclear Waste Policy
7 Act submitted to the Commission at its meeting on September 6, 1985.
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CONCLUSION

The NRC should adopt the rules proposed by this amended petition.

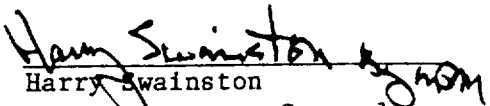
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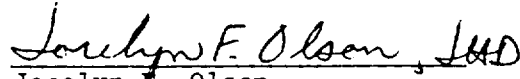
STATE OF NEVADA

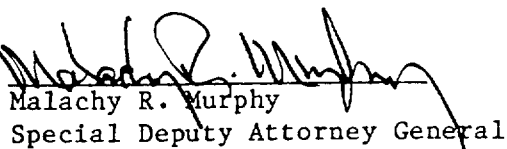
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AMENDED PETITION

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NUCLEAR REGULATORY COMMISSION

10 CFR Part 60

[Docket No. PRM-60-2 and 60-2A]

The States of Nevada and Minnesota; Denial of Petition for Rulemaking

AGENCY: Nuclear Regulatory Commission.

ACTION: Denial of petition for rulemaking.

SUMMARY: The Nuclear Regulatory Commission (NRC) is denying a petition for rulemaking (PRM-60-2 and 60-2A) submitted by the States of Nevada and Minnesota dealing with disposal of high-level radioactive waste (HLW). In PRM-60-2, the petitioners requested that the NRC adopt a regulation governing the implementation of certain generally-applicable environmental standards for HLW that had been proposed by the U. S. Environmental Protection Agency (EPA) in 1982. Subsequently, in PRM-60-2A, the petitioners amended their original petition after EPA issued final standards in 1985. The amended petition was placed on hold pending completion of certain rulemaking activities, including EPA and NRC development of new HLW disposal standards applicable only to a site at Yucca Mountain, Nevada. The NRC is denying the petition because the NRC considered petitioners' concerns in the development of its site-specific standards for a proposed repository at Yucca Mountain, and amending NRC's

generic repository licensing regulations at this time would unnecessarily expend limited Commission resources because there is no current expectation that the generic regulations, in their current form, will be used.

ADDRESSES: Copies of the petition for rulemaking, the public comments received, and the NRC's letter to the petitioners may be examined at the NRC Public Document Room, Room O1F23, located at 11555 Rockville Pike, Rockville, MD. These documents also may be viewed and downloaded electronically via the rulemaking website, at <http://ruleforum.llnl.gov>.

The NRC maintains an Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. These documents may be accessed through the NRC's Public Electronic Reading Room on the Internet at <http://www.nrc.gov/NRC/ADAMS/index.html>. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737, or by email to pdr@nrc.gov.

FOR FURTHER INFORMATION CONTACT: Mark Haisfield, telephone (301) 415-6196, e-mail MFH@nrc.gov or Timothy McCartin, telephone (301) 415-7285, e-mail TJM3@nrc.gov of the Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

The Petition

On April 30, 1985 (50 FR 18267), the NRC published a notice of receipt of a petition for rulemaking (PRM-60-2) filed by the States of Nevada and Minnesota (petitioners) on January 21, 1985. The petition requested that the NRC amend its regulations in 10 CFR Part 60 that govern disposal of HLW in geologic repositories. The petitioners requested that NRC amend its regulations to add assurance requirements proposed by the EPA (40 CFR 191.14) in EPA's proposed rule (47 FR 58196; December 29, 1982) to establish generally-applicable environmental standards for the management and disposal of spent nuclear fuel, HLW and transuranic wastes. EPA published its final environmental standards on September 19, 1985 (50 FR 38066).¹ The final standards included the assurance requirements of concern to petitioners (e.g., institutional controls and post-permanent closure monitoring), but EPA did not impose these requirements on facilities regulated by the NRC (see 40 CFR 191.14 (1985)). The petitioners subsequently filed an amended petition with the NRC on September 30, 1985 (PRM-60-2A) and the NRC published a notice of receipt of the amended petition on December 19, 1985 (50 FR 51701).

The amended petition requested that NRC amend 10 CFR Part 60 to: (1) incorporate regulations that are substantively equivalent to EPA's 1985 assurance requirements, and (2) incorporate regulations pertaining to NRC's potential adoption of the Final Environmental Impact Statement (FEIS) to be prepared by the U.S. Department of Energy (DOE) as part of its

¹ EPA's final disposal standards at 40 CFR Part 191 were struck down by the U.S. Court of Appeals for the 1st Circuit in NRDC v. EPA, 824 F.2d 1258 (1st Cir. 1987). However, in 1992, Congress, in the Waste Isolation Pilot Plant Land Withdrawal Act, Public Law 102-579, reinstated the standards for sites other than Yucca Mountain, Nevada, except for those portions that were the specific subject of the judicial remand. The assurance requirements, 40 CFR 191.14, were among the reinstated standards.

site recommendation of a potential geologic repository. In the notice of the amended petition, the NRC noted that rulemaking actions currently underway, when finalized, would address the concerns expressed by petitioners (50 FR 51703). The actions included proposed amendments to 10 CFR Part 60 to eliminate inconsistencies between NRC's generic regulations and EPA's 1985 standards, and proposed amendments to 10 CFR Part 51 on the adoption of DOE's FEIS. Accordingly, the notice advised readers that further consideration of the issues raised by petitioners would be deferred for consideration in these rulemakings. On July 3, 1989 (54 FR 27864), the NRC published a final rule, "NEPA Review Procedures for Geologic Repositories for High-Level Waste." In that rulemaking, the NRC denied the portion of the amended petition proposing specific regulations to govern the process for adopting DOE's FEIS, but considered the concerns raised by petitioners on this issue in the process of formulating the final rule (54 FR 27868).

Public Comments on the Petition

The notice of receipt of the petition for rulemaking invited interested persons to submit comments. The comment period closed on July 1, 1985, for PRM-60-2, and February 18, 1986, for PRM-60-2A. The NRC received eight comment letters on the petition and the amendment from seven commenters (one commenter provided comments on both PRM-60-2 and 60-2A). There were six comment letters on PRM-60-2 and two comment letters on PRM-60-2A. Of the seven commenters, five were from States and two were from representatives of the nuclear power industry. The State commenters agreed with petitioners that assurance requirements should be included in NRC regulations whereas the industry commenters believed that assurance provisions should be in guidance rather than the regulations.

Intervening Actions

Subsequent to submission of the petitions, two events occurred which substantially altered the legal landscape of the Government's program for the disposal of HLW. These events resulted in the Commission's withdrawal of its proposed amendments to conform 10 CFR Part 60 to EPA's 1985 standards (63 FR 66498; December 2, 1998). First, in 1987, Congress amended the Nuclear Waste Policy Act of 1982 (NWPA) in the Nuclear Waste Policy Amendments Act (Public Law 100-203), to provide, among other things, that only the site at Yucca Mountain, Nevada, (YM) would be characterized for possible selection as a geologic repository. Second, in the Energy Policy Act of 1992 (Public Law 102-486), Congress required that EPA issue public health and environmental radiation protection standards that would apply solely to the YM site and that NRC modify its technical requirements and criteria to be consistent with the EPA standards. Pursuant to these statutory changes, the EPA issued its final standards applicable to YM in a new 40 CFR Part 197 on June 13, 2001 (66 FR 32074) and the NRC issued its final conforming requirements in a new 10 CFR Part 63 - "Disposal of High-Level Radioactive Wastes in a Proposed Geologic Repository at Yucca Mountain, Nevada" (66 FR 55732; November 2, 2001). In its rulemaking, the NRC also amended 10 CFR Part 60 to make it clear that this part only applies to the licensing of repositories at sites other than Yucca Mountain.

Denial of the Petition

The NRC is denying the petition, as amended, for the following reasons:

1. The petitioners' concerns were considered in the rulemaking establishing 10 CFR Part 63 and the regulations in 10 CFR Part 60 no longer apply to a repository at YM. Therefore, the

petition, even if granted, would not affect the regulatory regime now in place for the licensing of a potential repository at the YM site.

The NRC has established a new set of regulations applicable specifically and exclusively to a proposed repository at YM in 10 CFR Part 63. The issues raised by the petitioners were considered in the course of this rulemaking as explained below. However, the petitioners' requested amendments were specifically directed to the provisions contained in 10 CFR Part 60, "Disposal of High-Level Radioactive Wastes in Geologic Repositories." At the time the petition was filed, these regulations were applicable to any potential HLW repository that would be sited, constructed or operated under the NWPAA, including one at YM. However, 10 CFR Part 60 now has been amended, in light of the statutory changes brought about by the 1987 amendments to the NWPAA and by the Energy Policy Act of 1992, to apply to any potential repository except one at YM.

2. There is no immediate need for revising 10 CFR Part 60 and doing so would unnecessarily expend limited Commission resources.

In the rulemaking to establish separate requirements for a repository at YM, the Commission chose to leave its existing generic requirements intact and in place. The Commission acknowledged that if a need arises to apply the existing generic requirements at 10 CFR Part 60, those requirements would need to be revised to account for developments in the capability of technical methods for assessing the performance of a geologic repository. See 64 FR 8641, 8643; February 22, 1999. However, the Commission expressed confidence that it would be afforded adequate time and resources in future years to amend its generic regulations for any additional repository site that might be authorized. Should it become necessary to revise these regulations, petitioners would have ample opportunity to suggest amendments.

Barring such an eventuality, however, there is no immediate need to amend 10 CFR Part 60 and doing so would unnecessarily expend limited Commission resources.

10 CFR Part 63 and the Petition

Although the Commission is denying the petition for the reasons stated above, the Commission considered the substantive issues raised in the petition in the development of NRC's final 10 CFR Part 63 rule. A summary of how the petitioners' proposals are addressed in 10 CFR Part 63 is provided below:

Post-permanent closure monitoring

The petitioners proposed revisions to the regulations that provide further specification to the requirements for the monitoring program to be implemented after the repository has been permanently sealed (i.e., post-permanent closure). Generally, the petitioners requested that post-permanent closure monitoring provide substantive confirmatory information regarding long-term repository performance at the time of license termination, post-permanent closure monitoring will not degrade repository performance, and that minimum requirements for the description of the monitoring program be established in the regulation (e.g., parameters to be monitored and monitoring devices). The Commission's new regulations in 10 CFR Part 63 address the petitioners' concerns under the requirements for a performance confirmation program and a program for post-permanent closure monitoring.

Although both the performance confirmation program and the post-permanent closure monitoring program include monitoring, the Commission considers these two programs to be distinctly different because each program addresses very distinct regulatory periods and decisions. The performance confirmation program is conducted up to the time of the decision

to permanently close the repository. Thus, the performance confirmation data is used to inform and increase confidence in the Commission's decision on permanent closure of the repository. Objectives and requirements of the performance confirmation program are specified in Subpart F of Part 63 that are consistent with the petitioners' recommendations (e.g., the performance confirmation program: monitors and evaluates subsurface conditions against design assumptions; confirms natural and engineered barriers are functioning as intended and anticipated; monitors and analyzes changes from the baseline condition of parameters that could affect repository performance; and is conducted in a manner that does not adversely affect repository performance). When DOE files an application to amend the license for permanent closure, it is required, by § 63.51(a)(1), to update its performance assessment of the repository with the performance confirmation data. Consistent with NRC's licensing procedures, this information and associated analyses will be available to all stakeholders.

The program of post-permanent closure monitoring begins after the performance confirmation program ends (i.e., after the time of permanent closure). The program for post-permanent closure monitoring would only occur if the Commission reaches a positive finding on the amendment for permanent closure. If an amendment for permanent closure is granted, it is expected that the performance confirmation program would have provided further information to increase confidence that repository performance is expected to comply with the regulations. Post-permanent closure monitoring is not considered an extension of the confirmation program, but is intended as a more general program expected to monitor a variety of conditions (e.g., land-use controls established under § 63.121(b), safeguards information, and potential release of radionuclides into ground water) to ensure public health and safety is protected. The Commission did not specify details for the post-permanent closure monitoring program in 10 CFR Part 63, as was provided for the performance confirmation program. DOE's

development and NRC review of the post-permanent closure monitoring program, submitted as part of the license amendment for permanent closure, will benefit from the results of the performance confirmation program (anticipated to extend over tens of years). Therefore, the Commission considers the general requirement for a post-permanent closure monitoring program to be appropriate and additional details are neither necessary nor warranted at this time. As part of a license amendment for permanent closure [§ 63.51(a)(2)], the details of the post-permanent closure monitoring program will be subject to regulatory review and the NRC's licensing process.

Institutional controls

The petitioners provided additional text for 10 CFR Part 60 that would clarify the regulatory approach for institutional controls. First, the petitioners proposed definitions for active and passive institutional controls. The Commission agrees with the concepts for active and passive institutional controls as proposed by the petitioners and has included the essential elements of the petitioner's definitions in 10 CFR Part 63. Specifically, 10 CFR Part 63 includes a definition for passive institutional controls (§ 63.302) and provides specific requirements for active institutional controls in the regulation. Active institutional controls are specific actions required during, and beyond, the operational phase of a potential repository that are more appropriate as regulatory requirements rather than as parts of a definition. Specific aspects of the petitioner's proposed definition for "active institutional control" are provided in 10 CFR Part 63, such as: (1) requirements for ownership and control of interests in land (§ 63.121); (2) program to control and monitor radioactive effluents during operations (§ 63.21); (3) performance confirmation program (Subpart F); and (4) plans for decontamination of surface facilities (§ 63.52). In addition, pursuant to the Energy Policy Act of 1992, DOE is

required to provide post-closure oversight to prevent any activity at the site that poses an unreasonable risk of breaching the repository's engineered or geologic barriers or increasing exposures of the public beyond allowable limits. A detailed description of DOE's post-closure oversight program is required at § 63.51(a)(3).

Second, the petitioners requested a new section be added to 10 CFR Part 60 clarifying that institutional controls will not assure compliance beyond 100 years after disposal, however, passive institutional controls may be considered in assessing the likelihood and consequences of processes and events affecting the geologic setting. A more restrictive approach for institutional controls has been implemented in 10 CFR Part 63 than was proposed in the petition. DOE is not allowed to rely on institutional controls to assure compliance and 10 CFR Part 63 does not permit passive institutional controls to be considered in assessing the likelihood and consequences of processes and events. The Commission's approach in 10 CFR Part 63 is based primarily on recommendations by the National Academy of Sciences (NAS).

In 1992, Congress directed EPA, at Section 801 of the Energy Policy Act of 1992, Public Law 102-486 (EnPA), to contract with the NAS to advise EPA on the appropriate technical basis for public health and safety standards governing the Yucca Mountain repository. On August 1, 1995, the NAS published its report entitled "Technical Bases for Yucca Mountain Standards." The EnPA specifically asked the NAS to address the issue of the effectiveness of institutional controls to prevent breaching of the repository's engineered or geologic barriers as a result of human intrusion. The NAS concluded that it was not reasonable to assume that institutional controls will prevent breaching of the repository's barriers. Thus, the NAS recommended a stylized calculation be used to determine whether or not a human intrusion would substantially degrade repository performance as an approach to understand potential impacts to the repository. EPA's final standards in 40 CFR 197 and the NRC's final regulation in 10 CFR

Part 63 adopted the NAS approach. The regulations in 10 CFR Part 63 do not assume institutional controls will last much beyond the time at which the repository is permanently closed (e.g., 100's of years), and include a stylized calculation to evaluate the consequences of a potential intrusion into the repository. The petitioners' recommendation that passive institutional controls could be considered in assessing processes and events affecting the geologic setting is contrary to the NAS recommendations that it is not possible to make scientifically supportable predictions of the probability that a repository's barriers will be breached as a result of human intrusion. The Commission agrees with the NAS and has not included any provisions for the use of active or passive institutional controls to be used in determining the likelihood of processes and events. The NRC's proposed regulations for Yucca Mountain provided further details regarding the NAS recommendations, institutional controls, and human intrusion (64 FR 8640; February 22, 1999).

Multiple barriers

The petitioners requested performance requirements for the multiple barrier system of the repository specify that each barrier should be designed or selected so that it complements the others and can significantly compensate for uncertainties about the performance of one or more of the other barriers. The regulations in 10 CFR Part 63 require the repository to be comprised of multiple barriers (at least one engineered and one natural) and requires DOE to identify each barrier important to waste isolation, describe each barrier's capability to isolate waste, and provide the technical basis for each barrier's capability. In arriving at this approach, the Commission provided a technical basis in the proposed rule for 10 CFR Part 63 (64 FR 8647; February 22, 1999) and considered public comments in the final rule for 10 CFR Part 63 (66 FR 55758; November 2, 2001). This approach provides the Commission the information

necessary to understand how all components of the repository system work together to ensure that the repository system is robust and not wholly dependent on a single barrier. The petitioners' request to include additional qualifying words such as "significantly compensate for uncertainties" are neither necessary nor warranted to ensure the Commission is provided sufficient information to make its regulatory decision.

Siting Criteria

The petitioners requested that the presence of significant concentrations of any naturally-occurring material not widely available from other sources be added as a potentially adverse condition to be considered under siting criteria. Siting criteria were provided for in 10 CFR Part 60, in part, to provide a basis for comparing different sites. The regulations in 10 CFR Part 63 do not contain such criteria because the need for siting criteria was removed when the Nuclear Waste Policy Amendments Act directed DOE to characterize a single site. Therefore, the petitioners' suggestion is not relevant to 10 CFR Part 63.

Adoption of the environmental impact statement

This section of the petition was reviewed by the Commission and denied in the NRC's final rule, "NEPA Review Procedures for Geologic Repositories for High-Level Waste" (54 FR 27864; July 3, 1989).

For the reasons cited in this document, the NRC denies this petition.

Dated at Rockville, Maryland, this _____ day of _____, 2002.

For the Nuclear Regulatory Commission.

Annette L. Vietti-Cook,
Secretary of the Commission.

Gram and Dunn
1420 5th Street, 33 Floor
Seattle, Washington 98101-2390

Dear Mr. R. Corbin Houchins:

I am responding to the petition for rulemaking, dated January 21, 1985, and subsequently amended on September 30, 1985, that was submitted to the U.S. Nuclear Regulatory Commission (NRC) on behalf of the States of Nevada and Minnesota. The petition and its amendment were docketed as PRM-60-2 and PRM-60-2A, respectively, and requested that the NRC amend its regulations dealing with the disposal of high-level radioactive waste (HLW).

The notice of receipt of the petition, and its amendment, were published, respectively, in the Federal Register on April 30, 1985 (50 FR 18267), and on December 19, 1985 (50 FR 51701). The comment periods closed on July 1, 1985, for PRM-60-2, and February 18, 1986, for PRM-60-2A. The NRC received eight comment letters on the petition and the amendment from seven commenters (one commenter providing comments on both PRM-60-2 and 60-2A). The amended petition was placed on hold pending development of new U.S. Environmental Protection Agency and NRC disposal standards applicable only to a site at Yucca Mountain, Nevada, as directed in the Energy Policy Act of 1992, Public Law 102-486.

The NRC has recently promulgated regulations, in a new 10 CFR Part 63, for the disposal of HLW at Yucca Mountain (66 FR 55732; November 2, 2001). During the development of Part 63, the NRC considered the substantive issues raised by the petitioners. However, the Commission decided not to revise, at this time, the generic regulations dealing with disposal of HLW in 10 CFR Part 60, which is the subject of the amended petition. Therefore, for these reasons, and as discussed in more detail in the enclosed Federal Register notice, your petition is denied. As you requested, also enclosed are copies of the petition and amendment.

R. Corbin Houchins

2

The Federal Register notice denying the petition is being transmitted to the Office of the Federal Register for publication.

Sincerely,

Annette Vietti-Cook
Secretary of the Commission

Enclosures:

1. Federal Register notice
2. PRM-60-2
3. PRM-60-2A

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