



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 2, 1997

The Honorable James N. Inhofe, Chairman
Subcommittee on Clean Air, Wetlands, Private
Property and Nuclear Safety
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

In the near future, the U.S. Nuclear Regulatory Commission (NRC) intends to publish in the Federal Register a direct final rule which will amend its regulations to allow persons licensed to construct or operate light-water nuclear power reactors the option of either meeting the criticality accident requirements of paragraph (a) of 10 CFR 70.24 in handling and storage areas for SNM, or electing to comply with certain requirements that would be incorporated into 10 CFR Part 50. These requirements generally have been used as the basis for granting exemptions to the requirements of 10 CFR 70.24 to reactor licensees in the past. In addition, paragraph (d) of 10 CFR 70.24 is being revised because it is redundant to 10 CFR 70.14(a).

Sincerely,

A handwritten signature in cursive script that reads "Dennis K. Rathbun".

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
Federal Register Notice

cc: Senator Bob Graham

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 2, 1997

The Honorable Dan Schaefer, Chairman
Subcommittee on Energy and Power
Committee on Commerce
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

In the near future, the U.S. Nuclear Regulatory Commission (NRC) intends to publish in the Federal Register a direct final rule which will amend its regulations to allow persons licensed to construct or operate light-water nuclear power reactors the option of either meeting the criticality accident requirements of paragraph (a) of 10 CFR 70.24 in handling and storage areas for SNM, or electing to comply with certain requirements that would be incorporated into 10 CFR Part 50. These requirements generally have been used as the basis for granting exemptions to the requirements of 10 CFR 70.24 to reactor licensees in the past. In addition, paragraph (d) of 10 CFR 70.24 is being revised because it is redundant to 10 CFR 70.14(a).

Sincerely,

A handwritten signature in cursive script, reading "Dennis K. Rathbun", is written above the typed name.

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
Federal Register Notice

cc: Representative Ralph Hall

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 50 and 70

RIN: 3150-AF87

Criticality Accident Requirements

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its regulations to provide light-water nuclear power reactor licensees with greater flexibility in meeting the requirement that licensees authorized to possess more than a small amount of special nuclear material (SNM) maintain a criticality monitoring system in each area where the material is handled, used, or stored. This action is taken as a result of the experience gained in processing and evaluating a number of exemption requests from power reactor licensees and NRC's safety assessments in response to these requests that concluded that the likelihood of criticality was negligible.

DATES: Comments on the proposed rule must be received on or before (30 days after publication in the Federal Register).

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ADDRESSES: Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudication Staff. Hand deliver comments to 11555 Rockville Pike, Maryland, between 7:45 am and 4:15 pm on Federal workdays.

Copies of any comments received may be examined at the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC.

For information on submitting comments electronically, see the discussion under Electronic Access in the Supplementary Information section.

FOR FURTHER INFORMATION CONTACT: Stan Turel, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6234, e-mail spt@nrc.gov.

SUPPLEMENTARY INFORMATION:

For additional information see the Direct Final Rule published in the rules section of this Federal Register.

Procedural Background

Because NRC considers this action noncontroversial and routine, we are publishing this proposed rule concurrently as a direct final rule. The direct final rule will become effective on (75 days after publication in the Federal Register). However, if the NRC receives significant adverse comments on the direct final rule by (30 days after publication in the Federal Register),

then the NRC will publish a document that withdraws the direct final rule. If the direct final rule is withdrawn, the NRC will address in a Final Rule the comments received in response to the proposed revisions in a subsequent final rule. Absent significant modifications to the proposed revisions requiring republication, the NRC will not initiate a second comment period for this action in the event the direct final rule is withdrawn.

Electronic Access

You may also provide comments via the NRC's interactive rulemaking web site through the NRC home page (<http://www.nrc.gov>). This site provides the availability to upload comments as files (any format), if your web browser supports that function. For information about the interactive rulemaking site, contact Ms. Carol Gallagher, (301) 415-6215; e-mail CAG@nrc.gov.

List of Subjects

10 CFR Part 50

Antitrust, Classified information, Criminal penalties, Fire protection, Intergovernmental relations, Nuclear power plants and reactors, Radiation protection, Reactor siting criteria, Reporting and recordkeeping requirements.

10 CFR Part 70

Criminal penalties, Hazardous materials transportation, Material control and accounting, Nuclear materials, Packaging and containers, Radiation protection, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Special nuclear material.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the National Environmental Policy Act of 1969, as amended, and 5 U.S.C. 553, the NRC is considering adopting the following amendments to 10 CFR Parts 50 and 70.

PART 50--DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

The authority citation for 10 CFR Part 50 continues to read as follows:

1. Authority: Secs. 102, 103, 104, 105, 161, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended 1244, 1246, (42 U.S.C. 5841, 5842, 5846).

Section 50.7 also issued under Pub. L. 95 - 601, sec. 10, 92 Stat. 2951, as amended by Pub. L. 102 - 486, sec. 2902, 106 Stat. 3123, (42 U.S.C. 5851). Sections 50.10 also issued under secs. 101, 185, 68 Stat. 936, 955, as amended (42 U.S.C. 2131, 2235); sec. 102, Pub. L. 91 - 190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.13, 50.54(dd), and 50.103 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138). Sections 50.23, 50.35, 50.55, and 50.56 also issued under sec. 185, 68 Stat. 955 (42 U.S.C. 2235). Sections 50.33a, 50.55a and Appendix Q also issued under sec. 102, Pub. L. 91 - 190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.34 and 50.54 also issued under sec. 204, 88 Stat. 1245 (42 U.S.C. 5844). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97 - 415, 96 Stat. 2073 (42 U.S.C. 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80 50.81 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Appendix F also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

2. Section 50.68 is added under the center heading "Issuance, Limitations, and Conditions of Licenses and Construction Permits" to read as follows:

§ 50.68 Criticality accident requirements.

(a) Each holder of a construction permit or operating license for a nuclear power reactor issued under this part, or a combined license for a nuclear power reactor issued under part 52 of this chapter shall comply with either 10 CFR 70.24 of this chapter or requirements in paragraph (b).

(b) Each licensee shall comply with the following requirements in lieu of maintaining a monitoring system capable of detecting a criticality as described in 10 CFR 70.24:

(1) Plant procedures may not permit handling and transportation at any one time of more fuel assemblies than have been determined to be safely subcritical under the most adverse moderation conditions feasible by unborated water.

(2) The estimated ratio of neutron production to neutron absorption and leakage (k -effective) of the fresh fuel in the fresh fuel storage racks shall be calculated assuming the racks are loaded with fuel of the maximum permissible U-235 enrichment and flooded with pure water and must not exceed 0.95, at a 95 percent probability, 95 percent confidence level.

(3) If optimum moderation of fresh fuel in the fresh fuel storage racks occurs when the racks are assumed to be loaded with fuel of the maximum permissible U-235 enrichment and filled with low-density hydrogenous fluid, the k -effective corresponding to this optimum moderation must not exceed 0.98, at a 95 percent probability, 95 percent confidence level.

(4) If no credit for soluble boron is taken, the k -effective of the spent fuel storage racks loaded with fuel of the maximum permissible U-235 enrichment must not exceed 0.95, at a 95 percent probability, 95 percent confidence level, if flooded with pure water. If credit is taken for

soluble boron, the k-effective of the spent fuel storage racks loaded with fuel of the maximum permissible U-235 enrichment must not exceed 0.95, at a 95 percent probability, 95 percent confidence level, if flooded with borated water, and the k-effective must remain below 1.0 (subcritical), at a 95 percent probability, 95 percent confidence level, if flooded with pure water.

(5) The quantity of SNM, other than nuclear fuel stored on site, is less than the quantity necessary for a critical mass.

(6) Radiation monitors, as required by GDC 63, are provided in storage and associated handling areas when fuel is present to detect excessive radiation levels and to initiate appropriate safety actions.

(7) The maximum nominal U-235 enrichment of the fresh fuel assemblies is limited to no greater than five (5.0) percent by weight.

PART 70--DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

The authority citation for 10 CFR Part 70 continues to read as follows:

1. Authority: Secs. 51, 53, 161, 182, 183, 68 Stat. 929, 930, 948, 953, 954, as amended, sec. 234, 83 Stat. 444, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2071, 2073, 2201, 2232, 2233, 2282, 2297f); secs. 201, as amended, 202, 204, 206, 88 Stat. 1242, as amended, 1244, 1245, 1246, (42 U.S.C. 5841, 5842, 5845, 5846).

Sections 70.1(c) and 70.20a(b) also issued under secs. 135, 141, Pub. L. 97 - 425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 70.7 also issued under Pub. L. 95 - 601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Section 70.21(g) also issued under

sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 70.31 also issued under sec. 57d, Pub. L. 93 - 377, 88 Stat. 475 (42 U.S.C. 2077). Sections 70.36 and 70.44 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234).

Section 70.61 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237).

Section 70.62 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

2. In § 70.24, paragraph (d) is revised to read as follows:

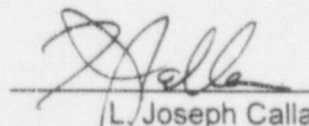
§ 70.24 Criticality accident requirements.

(d) The requirements in paragraph (a) through (c) of this section do not apply to holders of a construction permit or operating license for a nuclear power reactor issued pursuant to part 50 of this chapter, or combined licenses issued under part 52 of this chapter, if the holders comply with the requirements of paragraph (b) of 10 CFR 50.68 of this chapter.

* * * * *

Dated at Rockville, Maryland this 14th day of Nov, 1997.

For the Nuclear Regulatory Commission.


L. Joseph Callan,
Executive Director for Operations.

CONGRESSIONAL CORRESPONDENCE SYSTEM
DOCUMENT PREPARATION CHECKLIST

This check list is to be submitted with each document (or group of Qs/As) sent for processing into the CCS.

1. BRIEF DESCRIPTION OF DOCUMENT(S) Att. to Sen. Inhofe
2. TYPE OF DOCUMENT ☒ CORRESPONDENCE ☐ HEARINGS (Qs/As)
3. DOCUMENT CONTROL ☐ SENSITIVE (NRC ONLY) ☒ NON-SENSITIVE
4. CONGRESSIONAL COMMITTEE AND SUBCOMMITTEE (if applicable)

Congressional Committee

Subcommittee
5. SUBJECT CODES
(A) _____
(B) _____
(C) _____
6. SOURCE OF DOCUMENTS
(A) _____ 5520 (DOCUMENT NAME _____)
(B) _____ SCAN (C) _____ ATTACHMENTS
(D) _____ OTHER _____
7. SYSTEM LOG DATES
(A) 2/4/98 DATA OCA SENT DOCUMENT TO CCS
(B) _____ DATE CCS RECEIVED DOCUMENT
(C) _____ DATE RETURNED TO OCA FOR ADDITIONAL INFORMATION
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COMMENTS:

RELEASE TO PDR

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