

PART 51—ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING AND RELATED REGULATORY FUNCTIONS

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AUTHORITY: Sec. 161, 68 Stat. 948, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953, (42 U.S.C. 2201, 2297f); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842). Subpart A also issued under National Environmental Policy Act of 1969, secs. 102, 104, 105, 83 Stat. 853-854, as amended (42 U.S.C. 4332, 4334, 4335); and Pub. L. 95-604, Title II, 92 Stat. 3033-3041; and sec. 193, Pub. L. 101-575, 104 Stat. 2835 (42 U.S.C. 2243). Sections 51.20, 51.30, 51.60, 51.80, and 51.97 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241, and sec. 148, Pub. L. 100-203, 101 Stat. 1330-223 (42 U.S.C. 10155, 10161, 10168). Section 51.22 also issued under sec. 274, 73 Stat. 688, as amended by 92 Stat. 3036-3038 (42 U.S.C. 2021) and under Nuclear Waste Policy Act of 1982, sec. 121, 96 Stat. 2228 (42 U.S.C. 10141). Sections 51.43, 51.67, and 51.109 also under Nuclear Waste Policy Act of 1982, sec. 114(f), 96 Stat. 2216, as amended (42 U.S.C. 10134(f)).

SOURCE: 49 FR 9381, Mar. 12, 1984, unless otherwise noted.

§ 51.1 Scope.

This part contains environmental protection regulations applicable to NRC's domestic licensing and related regulatory functions. These regulations do not apply to export licensing matters within the scope of part 110 of this chapter or to any environmental effects which NRC's domestic licensing and related regulatory functions may have upon the environment of foreign nations. Subject to these limitations, the regulations in this part implement:

(a) Section 102(2) of the National Environmental Policy Act of 1969, as amended.

§ 51.2 Subparts.

(a) The regulations in subpart A of this part implement section 102(2) of the National Environmental Policy Act of 1969, as amended.

§ 51.3 Resolution of conflict.

In any conflict between a general rule in subpart A of this part and a special rule in another subpart of this part

or another part of this chapter applicable to a particular type of proceeding, the special rule governs.

§ 51.4 Definitions.

As used in this part:

Act means the Atomic Energy Act of 1954 (Pub. L. 83-703, 68 Stat. 919) including any amendments thereto.

Commission means the Nuclear Regulatory Commission or its authorized representatives.

NRC means the Nuclear Regulatory Commission, the agency established by Title II of the Energy Reorganization Act of 1974, as amended.

NRC staff means any NRC officer or employee or his/her authorized representative, except a Commissioner, a member of a Commissioner's immediate staff, an Atomic Safety and Licensing Board, an Atomic Safety and Licensing Appeal Board, a presiding officer, an administrative judge, an administrative law judge, or any other officer or employee of the Commission who performs adjudicatory functions.

NRC Staff Director means:

Executive Director for Operations;
Director, Office of Nuclear Reactor Regulation;
Director, Office of Nuclear Material Safety and Safeguards;
Director, Office of Nuclear Regulatory Research;
Director, Office of Governmental and Public Affairs; and

The designee of any NRC staff director.

[49 FR 9381, Mar. 12, 1984, as amended at 51 FR 35999, Oct. 8, 1986; 52 FR 31612, Aug. 21, 1987]

§ 51.5 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 51.6 Specific exemptions.

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines

are authorized by law and are otherwise in the public interest.

Subpart A—National Environmental Policy Act—Regulations Implementing Section 102(2)

§51.10 Purpose and scope of subpart; application of regulations of Council on Environmental Quality.

(a) The National Environmental Policy Act of 1969, as amended (NEPA) directs that, to the fullest extent possible: (1) The policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in NEPA, and (2) all agencies of the Federal Government shall comply with the procedures in section 102(2) of NEPA except where compliance would be inconsistent with other statutory requirements. The regulations in this subpart implement section 102(2) of NEPA in a manner which is consistent with the NRC's domestic licensing and related regulatory authority under the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and the Uranium Mill Tailings Radiation Control Act of 1978, and which reflects the Commission's announced policy to take account of the regulations of the Council on Environmental Quality published November 29, 1978 (43 FR 55978-56007) voluntarily, subject to certain conditions. This subpart does not apply to export licensing matters within the scope of part 110 of this chapter nor does it apply to any environmental effects which NRC's domestic licensing and related regulatory functions may have upon the environment of foreign nations.

(b) The Commission recognizes a continuing obligation to conduct its domestic licensing and related regulatory functions in a manner which is both receptive to environmental concerns and consistent with the Commission's responsibility as an independent regulatory agency for protecting the radiological health and safety of the public. Accordingly, the Commission will:

(1) Examine any future interpretation or change to the Council's NEPA regulations;

(2) Follow the provisions of 40 CFR 1501.5 and 1501.6 relating to lead agencies and cooperating agencies, except that the Commission reserves the right to prepare an independent environmental impact statement whenever the NRC has regulatory jurisdiction over an activity even though the NRC has not been designated as lead agency for preparation of the statement; and

(3) Reserve the right to make a final decision on any matter within the NRC's regulatory authority even though another agency has made a predecisional referral of an NRC action to the Council under the procedures of 40 CFR part 1504.

(c) The regulations in this subpart¹ also address the limitations imposed on NRC's authority and responsibility under the National Environmental Policy Act of 1969, as amended, by the Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, 86 Stat. 816 *et seq.* (33 U.S.C. 1251 *et seq.*) In accordance with section 511(c)(2) of the Federal Water Pollution Control Act (86 Stat. 893, 33 U.S.C. 1371(c)(2)) the NRC recognizes that responsibility for Federal regulation of nonradiological pollutant discharges² into receiving waters rests by statute with the Environmental Protection Agency.

(d) Commission actions initiating or relating to administrative or judicial civil or criminal enforcement actions or proceedings are not subject to Section 102(2) of NEPA. These actions include issuance of notices of violation, orders, and denials of requests for action pursuant to subpart B of part 2 of this chapter; matters covered by part 15 and part 160 of this chapter; and issuance of confirmatory action letters, bulletins, generic letters, notices

¹See also Second Memorandum of Understanding Regarding Implementation of Certain NRC and EPA Responsibilities and Policy Statement on Implementation of Section 511 of the Federal Water Pollution Control Act (FWPCA) attached as Appendix A thereto, which were published in the FEDERAL REGISTER on December 31, 1975 (40 FR 60115) and became effective January 30, 1976.

²On June 1, 1976, the U.S. Supreme Court held that "'pollutants' subject to regulation under the FWPCA [Federal Water Pollution Control Act] do not include source, byproduct, and special nuclear materials. . . ." *Train v. Colorado PIRG*, 426 U.S. 1 at 25.

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of deviation, and notices of non-conformance.

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 43578, Oct. 26, 1989; 61 FR 43408, Aug. 22, 1996]

§51.11 Relationship to other subparts. [Reserved]

§51.12 Application of subpart to ongoing environmental work.

(a) Except as otherwise provided in this section, the regulations in this subpart shall apply to the fullest extent practicable to NRC's ongoing environmental work.

(b) No environmental report or any supplement to an environmental report filed with the NRC and no environmental assessment, environmental impact statement or finding of no significant impact or any supplement to any of the foregoing issued by the NRC before June 7, 1984, need be redone and no notice of intent to prepare an environmental impact statement or notice of availability of these environmental documents need be republished solely by reason of the promulgation on March 12, 1984, of this revision of part 51.

[49 FR 9381, Mar. 12, 1984, as amended at 49 FR 24513, June 14, 1984]

§51.13 Emergencies.

Whenever emergency circumstances make it necessary and whenever, in other situations, the health and safety of the public may be adversely affected if mitigative or remedial actions are delayed, the Commission may take an action with significant environmental impact without observing the provisions of these regulations. In taking an action covered by this section, the Commission will consult with the Council as soon as feasible concerning appropriate alternative NEPA arrangements.

§51.14 Definitions.

(a) As used in this subpart:

Categorical Exclusion means a category of actions which do not individually or cumulatively have a significant effect on the human environment and which the Commission has found to have no such effect in accordance with procedures set out in §51.22, and

for which, therefore, neither an environmental assessment nor an environmental impact statement is required.

Cooperating Agency means any Federal agency other than the NRC which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. By agreement with the Commission, a State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may become a cooperating agency.

Council means the Council on Environmental Quality (CEQ) established by Title II of NEPA.

DOE means the U.S. Department of Energy or its duly authorized representatives.

Environmental Assessment means a concise public document for which the Commission is responsible that serves to:

(1) Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

(2) Aid the Commission's compliance with NEPA when no environmental impact statement is necessary.

(3) Facilitate preparation of an environmental impact statement when one is necessary.

Environmental document includes an environmental assessment, an environmental impact statement, a finding of no significant impact, an environmental report and any supplements to or comments upon those documents, and a notice of intent.

Environmental Impact Statement means a detailed written statement as required by section 102(2)(C) of NEPA.

Environmental report means a document submitted to the Commission by an applicant for a permit, license, or other form of permission, or an amendment to or renewal of a permit, license or other form of permission, or by a petitioner for rulemaking, in order to aid the Commission in complying with section 102(2) of NEPA.

Finding of No Significant Impact means a concise public document for

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which the Commission is responsible that briefly states the reasons why an action, not otherwise excluded, will not have a significant effect on the human environment and for which therefore an environmental impact statement will not be prepared.

NEPA means the National Environmental Policy Act of 1969, as amended (Pub. L. 91-190, 83 Stat. 852, 856, as amended by Pub. L. 94-83, 89 Stat. 424, 42 U.S.C. 4321, *et seq.*).

Notice of Intent means a notice that an environmental impact statement will be prepared and considered.

Uranium enrichment facility means:

(1) Any facility used for separating the isotopes for uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(2) Any equipment or device, or important component part especially designed for such equipment or device, capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

(b) The definitions in 40 CFR 1508.3, 1508.7, 1508.8, 1508.14, 1508.15, 1508.16, 1508.17, 1508.18, 1508.20, 1508.23, 1508.25, 1508.26, and 1508.27, will also be used in implementing section 102(2) of NEPA.

[49 FR 9381, Mar. 12, 1984, as amended at 57 FR 18391, Apr. 30, 1992]

§51.15 Time schedules.

Consistent with the purposes of NEPA, the Administrative Procedure Act, the Commission's rules of practice in part 2 of this chapter, §§51.100 and 51.101, and with other essential considerations of national policy:

(a) The appropriate NRC staff director may, and upon the request of an applicant for a proposed action or a petitioner for rulemaking shall, establish a time schedule for all or any constituent part of the NRC staff NEPA process. To the maximum extent practicable, the NRC staff will conduct its NEPA review in accordance with any time schedule established under this section.

(b) Pursuant to subpart G of part 2 of this chapter, the presiding officer, the Atomic Safety and Licensing Appeal

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Board or the Commissioners acting as a collegial body may establish a time schedule for all or any part of an adjudicatory or rulemaking proceeding to the extent that each has jurisdiction.

§51.16 Proprietary information.

(a) Proprietary information, such as trade secrets or privileged or confidential commercial or financial information, will be treated in accordance with the procedures provided in §2.790, "Public Inspections, Exemptions, Requests for Withholding," of part 2, "Rules of Practice," of this chapter.

(b) Any proprietary information which a person seeks to have withheld from public disclosure shall be submitted in accordance with §2.790 of this chapter. When submitted, the proprietary information should be clearly identified and accompanied by a request, containing detailed reasons and justifications, that the proprietary information be withheld from public disclosure. A non-proprietary summary describing the general content of the proprietary information should also be provided.

§51.17 Information collection requirements; OMB approval.

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0021.

(b) The approved information collection requirements in this part appear in §§51.6, 51.16, 51.41, 51.45, 51.50, 51.51, 51.52, 51.53, 51.54, 51.55, 51.60, 51.61, 51.62, 51.66, 51.68, and 51.69.

[49 FR 24513, June 14, 1984, as amended at 62 FR 52188, Oct. 6, 1997; 67 FR 67100, Nov. 4, 2002]

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PRELIMINARY PROCEDURES

CLASSIFICATION OF LICENSING AND REGULATORY ACTIONS

§51.20 Criteria for and identification of licensing and regulatory actions requiring environmental impact statements.

(a) Licensing and regulatory actions requiring an environmental impact statement shall meet at least one of the following criteria:

(1) The proposed action is a major Federal action significantly affecting the quality of the human environment.

(2) The proposed action involves a matter which the Commission, in the exercise of its discretion, has determined should be covered by an environmental impact statement.

(b) The following types of actions require an environmental impact statement or a supplement to an environmental impact statement:

(1) Issuance of a limited work authorization or a permit to construct a nuclear power reactor, testing facility or fuel reprocessing plant pursuant to part 50 of this chapter.

(2) Issuance or renewal of a full power or design capacity license to operate a nuclear power reactor, testing facility, or fuel reprocessing plant pursuant to part 50 of this chapter.

(3) Issuance of a permit to construct or a design capacity license to operate or renewal of a design capacity license to operate an isotopic enrichment plant pursuant to part 50 of this chapter.

(4) Conversion of a provisional operating license for a nuclear power reactor, testing facility or fuel reprocessing plant to a full term or design capacity license pursuant to part 50 of this chapter if a final environmental impact statement covering full term or design capacity operation has not been previously prepared.

(5) [Reserved]

(6) Issuance of a license to manufacture pursuant to Appendix M of part 52 of this chapter.

(7) Issuance of a license to possess and use special nuclear material for processing and fuel fabrication, scrap recovery, or conversion of uranium hexafluoride pursuant to part 70 of this chapter.

(8) Issuance of a license to possess and use source material for uranium milling or production of uranium hexafluoride pursuant to part 40 of this chapter.

(9) Issuance of a license pursuant to part 72 of this chapter for the storage of spent fuel in an independent spent fuel storage installation (ISFSI) at a site not occupied by a nuclear power reactor, or for the storage of spent fuel or high-level radioactive waste in a monitored retrievable storage installation (MRS).

(10) Issuance of a license for a uranium enrichment facility.

(11) Issuance of renewal of a license authorizing receipt and disposal of radioactive waste from other persons pursuant to part 61 of this chapter.

(12) Issuance of a license amendment pursuant to part 61 of this chapter authorizing (i) closure of a land disposal site, (ii) transfer of the license to the disposal site owner for the purpose of institutional control, or (iii) termination of the license at the end of the institutional control period.

(13) Issuance of a construction authorization and license pursuant to part 60 or part 63 of this chapter.

(14) Any other action which the Commission determines is a major Commission action significantly affecting the quality of the human environment. As provided in §51.22(b), the Commission may, in special circumstances, prepare an environmental impact statement on an action covered by a categorical exclusion.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 31681, Aug. 19, 1988; 53 FR 24052, June 27, 1988; 54 FR 15398, Apr. 18, 1989; 54 FR 27870, July 3, 1989; 57 FR 18392, Apr. 30, 1992; 66 FR 55790, Nov. 2, 2001]

§51.21 Criteria for and identification of licensing and regulatory actions requiring environmental assessments.

All licensing and regulatory actions subject to this subpart require an environmental assessment except those identified in §51.20(b) as requiring an environmental impact statement, those identified in §51.22(c) as categorical exclusions, and those identified in §51.22(d) as other actions not requiring environmental review. As provided in

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§ 51.22(b), the Commission may, in special circumstances, prepare an environmental assessment on an action covered by a categorical exclusion.

[54 FR 27870, July 3, 1989]

§ 51.22 Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review.

(a) Licensing and regulatory actions eligible for categorical exclusion shall meet the following criterion: The proposed action belongs to a category of actions which the Commission, by rule or regulation, has declared to be a categorical exclusion, after first finding that the category of actions does not individually or cumulatively have a significant effect on the human environment.

(b) Except in special circumstances, as determined by the Commission upon its own initiative or upon request of any interested person, an environmental assessment or an environmental impact statement is not required for any action within a category of actions included in the list of categorical exclusions set out in paragraph (c) of this section. Special circumstances include the circumstance where the proposed action involves unresolved conflicts concerning alternative uses of available resources within the meaning of section 102(2)(E) of NEPA.

(c) The following categories of actions are categorical exclusions:

(1) Amendments to Parts 1, 2, 4, 7, 8, 9, 10, 11, 19, 21, 25, 55, 75, 95, 110, 140, 150, 170, or 171 of this chapter, and actions on petitions for rulemaking relating to Parts 1, 2, 4, 7, 9, 10, 11, 14, 19, 21, 25, 55, 75, 95, 110, 140, 150, 170, or 171.

(2) Amendments to the regulations in this chapter which are corrective or of a minor or nonpolicy nature and do not substantially modify existing regulations, and actions on petitions for rulemaking relating to these amendments.

(3) Amendments to parts 20, 30, 31, 32, 33, 34, 35, 39, 40, 50, 51, 54, 60, 61, 63, 70, 71, 72, 73, 74, 81, and 100 of this chapter which relate to—

(i) Procedures for filing and reviewing applications for licenses or construction permits or other forms of

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permission or for amendments to or renewals of licenses or construction permits or other forms of permission;

(ii) Recordkeeping requirements; or

(iii) Reporting requirements; and

(iv) Actions on petitions for rulemaking relating to these amendments.

(4) Entrance into or amendment, suspension, or termination of all or part of an agreement with a State pursuant to section 274 of the Atomic Energy Act of 1954, as amended, providing for assumption by the State and discontinuance by the Commission of certain regulatory authority of the Commission.

(5) Procurement of general equipment and supplies.

(6) Procurement of technical assistance, confirmatory research provided that the confirmatory research does not involve any significant construction impacts, and personal services relating to the safe operation and protection of commercial reactors, other facilities, and materials subject to NRC licensing and regulation.

(7) Personnel actions.

(8) Issuance, amendment, or renewal of operators' licenses pursuant to part 55 of this chapter.

(9) Issuance of an amendment to a permit or license for a reactor pursuant to part 50 of this chapter which changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in part 20 of this chapter, or which changes an inspection or a surveillance requirement, provided that (i) the amendment involves no significant hazards consideration, (ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and (iii) there is no significant increase in individual or cumulative occupational radiation exposure.

(10) Issuance of an amendment to a permit or license under parts 30, 31, 32, 33, 34, 35, 36, 39, 40, 50, 60, 61, 63, 70, or part 72 of this chapter which —

(i) Changes surety, insurance and/or indemnity requirements; or

(ii) Changes recordkeeping, reporting, or administrative procedures or requirements.

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(11) Issuance of amendments to licenses for fuel cycle plants and radioactive waste disposal sites and amendments to materials licenses identified in §51.60(b)(1) which are administrative, organizational, or procedural in nature, or which result in a change in process operations or equipment, provided that (i) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, (ii) there is no significant increase in individual or cumulative occupational radiation exposure, (iii) there is no significant construction impact, and (iv) there is no significant increase in the potential for or consequences from radiological accidents.

(12) Issuance of an amendment to a license pursuant to parts 50, 60, 61, 63, 70, 72, or 75 of this chapter relating solely to safeguards matters (i.e., protection against sabotage or loss or diversion of special nuclear material) or issuance of an approval of a safeguards plan submitted pursuant to parts 50, 70, 72, and 73 of this chapter, provided that the amendment or approval does not involve any significant construction impacts. These amendments and approvals are confined to—

- (i) Organizational and procedural matters;
- (ii) Modifications to systems used for security and/or materials accountability;
- (iii) Administrative changes; and
- (iv) Review and approval of transportation routes pursuant to 10 CFR 73.37.

(13) Approval of package designs for packages to be used for the transportation of licensed materials.

(14) Issuance, amendment, or renewal of materials licenses issued pursuant to 10 CFR parts 30, 31, 32, 33, 34, 35, 36, 39, 40 or part 70 authorizing the following types of activities:

- (i) Distribution of radioactive materials and devices or products containing radioactive material to general licensees and to persons exempt from licensing.
- (ii) Distribution of radiopharmaceuticals, generators, reagent kits and/or sealed sources to persons licensed pursuant to 10 CFR 35.18.
- (iii) Nuclear pharmacies.
- (iv) Medical and veterinary.

(v) Use of radioactive materials for research and development and for educational purposes.

(vi) Industrial radiography.

(vii) Irradiators.

(viii) Use of sealed sources and use of gauging devices, analytical instruments and other devices containing sealed sources.

(ix) Use of uranium as shielding material in containers or devices.

(x) Possession of radioactive material incident to performing services such as installation, maintenance, leak tests and calibration.

(xi) Use of sealed sources and/or radioactive tracers in well-logging procedures.

(xii) Acceptance of packaged radioactive wastes from others for transfer to licensed land burial facilities provided the interim storage period for any package does not exceed 180 days and the total possession limit for all packages held in interim storage at the same time does not exceed 50 curies.

(xiii) Manufacturing or processing of source, byproduct, or special nuclear materials for distribution to other licensees, except processing of source material for extraction of rare earth and other metals.

(xiv) Nuclear laundries.

(xv) Possession, manufacturing, processing, shipment, testing, or other use of depleted uranium military munitions.

(xvi) Any use of source, byproduct, or special nuclear material not listed above which involves quantities and forms of source, byproduct, or special nuclear material similar to those listed in paragraphs (c)(14) (i) through (xv) of this section (Category 14).

(15) Issuance, amendment or renewal of licenses for import of nuclear facilities and materials pursuant to part 110 of this chapter, except for import of spent power reactor fuel.

(16) Issuance or amendment of guides for the implementation of regulations in this chapter, and issuance or amendment of other informational and procedural documents that do not impose any legal requirements.

(17) Issuance of an amendment to a permit or license pursuant to parts 30, 40, 50 or part 70 of this chapter which

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deletes any limiting condition of operation or monitoring requirement based on or applicable to any matter subject to the provisions of the Federal Water Pollution Control Act.

(18) Issuance of amendments or orders authorizing licensees of production or utilization facilities to resume operation, provided the basis for the authorization rests solely on a determination or redetermination by the Commission that applicable emergency planning requirements are met.

(19) Issuance, amendment, modification, or renewal of a certificate of compliance of gaseous diffusion enrichment facilities pursuant to 10 CFR part 76.

(20) Decommissioning of sites where licensed operations have been limited to the use of—

- (i) Small quantities of short-lived radioactive materials; or
- (ii) Radioactive materials in sealed sources, provided there is no evidence of leakage of radioactive material from these sealed sources.

(21) Approvals of direct or indirect transfers of any license issued by NRC and any associated amendments of license required to reflect the approval of a direct or indirect transfer of an NRC license.

(d) In accordance with section 121 of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10141), the promulgation of technical requirements and criteria that the Commission will apply in approving or disapproving applications under part 60 or 63 of this chapter shall not require an environmental impact statement, an environmental assessment, or any environmental review under subparagraph (E) or (F) of section 102(2) of NEPA.

[49 FR 9381, Mar. 12, 1984, as amended at 51 FR 9766, Mar. 21, 1986; 51 FR 33231, Sept. 18, 1986; 52 FR 8241, Mar. 17, 1987; 54 FR 27870, July 3, 1989; 58 FR 7737, Feb. 9, 1993; 59 FR 48959, Sept. 23, 1994; 60 FR 22491, May 8, 1995; 61 FR 9902, Mar. 12, 1996; 62 FR 39091, July 21, 1997; 63 FR 66735, Dec. 3, 1998; 65 FR 54950, Sept. 12, 2000; 66 FR 55790, Nov. 2, 2001]

EFFECTIVE DATE NOTE: At 67 FR 78141, Dec. 23, 2002, §51.22 was amended by revising paragraph (c)(12), effective Mar. 24, 2003. For the convenience of the user, the revised text is set forth as follows:

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§51.22 Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review.

* * * * *

(c) * * *

(12) Issuance of an amendment to a license implementing any requirement of this chapter relating solely to safeguards matters (i.e., protection against sabotage or loss or diversion of special nuclear material), or issuance of an approval of a safeguards plan (or a revision of a safeguards plan) submitted pursuant to a requirement of any part of this chapter, provided that the amendment or approval does not involve any significant construction impacts. These amendments and approvals are confined to:

- (i) Organizational and procedural matters;
- (ii) Modifications to systems used for security and/or materials accountability;
- (iii) Administrative changes; and
- (iv) Review and approval of transportation routes pursuant to 10 CFR 73.37.

* * * * *

§51.23 Temporary storage of spent fuel after cessation of reactor operation—generic determination of no significant environmental impact.

(a) The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.

(b) Accordingly, as provided in §§51.30(b), 51.53, 51.61, 51.80(b), 51.95 and 51.97(a), and within the scope of the generic determination in paragraph (a) of

this section, no discussion of any environmental impact of spent fuel storage in reactor facility storage pools or independent spent fuel storage installations (ISFSI) for the period following the term of the reactor operating license or amendment or initial ISFSI license or amendment for which application is made, is required in any environmental report, environmental impact statement, environmental assessment or other analysis prepared in connection with the issuance or amendment of an operating license for a nuclear reactor or in connection with the issuance of an initial license for storage of spent fuel at an ISFSI, or any amendment thereto.

(c) This section does not alter any requirements to consider the environmental impacts of spent fuel storage during the term of a reactor operating license or a license for an ISFSI in a licensing proceeding.

[49 FR 34694, Aug. 31, 1984, as amended at 55 FR 38474, Sept. 18, 1990]

DETERMINATIONS TO PREPARE ENVIRONMENTAL IMPACT STATEMENTS, ENVIRONMENTAL ASSESSMENTS OR FINDINGS OF NO SIGNIFICANT IMPACT, AND RELATED PROCEDURES

§ 51.25 Determination to prepare environmental impact statement or environmental assessment; eligibility for categorical exclusion.

Before taking a proposed action subject to the provisions of this subpart, the appropriate NRC staff director will determine on the basis of the criteria and classifications of types of actions in §§ 51.20, 51.21 and 51.22 of this subpart whether the proposed action is of the type listed in § 51.22(c) as a categorical exclusion or whether an environmental impact statement or an environmental assessment should be prepared. An environmental assessment is not necessary if it is determined that an environmental impact statement will be prepared.

§ 51.26 Requirement to publish notice of intent and conduct scoping process.

(a) Whenever the appropriate NRC staff director determines that an environmental impact statement will be

prepared by NRC in connection with a proposed action, a notice of intent will be prepared as provided in § 51.27, and will be published in the FEDERAL REGISTER as provided in § 51.116, and an appropriate scoping process (see §§ 51.27, 51.28, and 51.29) will be conducted.

(b) The scoping process may include a public scoping meeting.

(c) Upon receipt of an application and accompanying environmental impact statement under § 60.22 or § 63.22 of this chapter (pertaining to geologic repositories for high-level radioactive waste), the appropriate NRC staff director will include in the notice of docketing required to be published by § 2.101(f)(8) of this chapter a statement of Commission intention to adopt the environmental impact statement to the extent practicable. However, if the appropriate NRC staff director determines, at the time of such publication or at any time thereafter, that NRC should prepare a supplemental environmental impact statement in connection with the Commission's action on the license application, the NRC shall follow the procedures set out in paragraph (a) of this section.

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 27870, July 3, 1989; 66 FR 55791, Nov. 2, 2001]

§ 51.27 Notice of intent.

(a) The notice of intent required by § 51.26 shall:

(1) State that an environmental impact statement will be prepared;

(2) Describe the proposed action and, to the extent sufficient information is available, possible alternatives;

(3) State whether the applicant or petitioner for rulemaking has filed an environmental report, and, if so, where copies are available for public inspection;

(4) Describe the proposed scoping process, including the role of participants, whether written comments will be accepted, the last date for submitting comments and where comments should be sent, whether a public scoping meeting will be held, the time and place of any scoping meeting or when the time and place of the meeting will be announced; and

(5) State the name, address and telephone number of an individual in NRC

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who can provide information about the proposed action, the scoping process, and the environmental impact statement.

SCOPING

§ 51.28 Scoping—participants.

(a) The appropriate NRC staff director shall invite the following persons to participate in the scoping process:

(1) The applicant or the petitioner for rulemaking;

(2) Any person who has petitioned for leave to intervene in the proceeding or who has been admitted as a party to the proceeding;

(3) Any other Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved or which is authorized to develop and enforce relevant environmental standards;

(4) Affected State and local agencies, including those authorized to develop and enforce relevant environmental standards;

(5) Any affected Indian tribe; and

(6) Any person who has requested an opportunity to participate in the scoping process.

(b) The appropriate NRC staff director may also invite any other appropriate person to participate in the scoping process.

(c) Participation in the scoping process for an environmental impact statement does not entitle the participant to become a party to the proceeding to which the environmental impact statement relates. Participation in an adjudicatory proceeding is governed by the procedures in 10 CFR 2.714 and 2.715. Participation in a rulemaking proceeding in which the Commission has decided to have a hearing is governed by the provisions in the notice of hearing.

§ 51.29 Scoping—environmental impact statement.

(a) The scoping process for an environmental impact statement shall begin as soon as practicable after publication of the notice of intent as provided in § 51.116, and shall be used to:

(1) Define the proposed action which is to be the subject of the statement.

The provisions of 40 CFR 1502.4 will be used for this purpose.

(2) Determine the scope of the statement and identify the significant issues to be analyzed in depth.

(3) Identify and eliminate from detailed study issues which are peripheral or are not significant or which have been covered by prior environmental review. Discussion of these issues in the statement will be limited to a brief presentation of why they are peripheral or will not have a significant effect on the quality of the human environment or a reference to their coverage elsewhere.

(4) Identify any environmental assessments and other environmental impact statements which are being or will be prepared that are related to but are not part of the scope of the statement under consideration.

(5) Identify other environmental review and consultation requirements related to the proposed action so that other required analyses and studies may be prepared concurrently and integrated with the environmental impact statement.

(6) Indicate the relationship between the timing of the preparation of environmental analyses and the Commission's tentative planning and decision-making schedule.

(7) Identify any cooperating agencies, and as appropriate, allocate assignments for preparation and schedules for completion of the statement to the NRC and any cooperating agencies.

(8) Describe the means by which the environmental impact statement will be prepared, including any contractor assistance to be used.

(b) At the conclusion of the scoping process, the appropriate NRC staff director will prepare a concise summary of the determinations and conclusions reached, including the significant issues identified, and will send a copy of the summary to each participant in the scoping process.

(c) At any time prior to issuance of the draft environmental impact statement, the appropriate NRC staff director may revise the determinations made under paragraph (b) of this section, as appropriate, if substantial

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changes are made in the proposed action, or if significant new circumstances or information arise which bear on the proposed action or its impacts.

ENVIRONMENTAL ASSESSMENT

§ 51.30 Environmental assessment.

(a) An environmental assessment shall identify the proposed action and include:

(1) A brief discussion of:

(i) The need for the proposed action;

(ii) Alternatives as required by section 102(2)(E) of NEPA;

(iii) The environmental impacts of the proposed action and alternatives as appropriate; and

(2) A list of agencies and persons consulted, and identification of sources used.

(b) Unless otherwise determined by the Commission, an environmental assessment will not include discussion of any aspect of the storage of spent fuel within the scope of the generic determination in § 51.23(a) and in accordance with the provisions of § 51.23(b).

(c) An environmental assessment for a proposed action regarding a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the Nuclear Waste Policy Act of 1982 (96 Stat. 2242, 42 U.S.C. 10161(b)(1)).

[49 FR 9381, Mar. 12, 1984, as amended at 49 FR 34694, Aug. 31, 1984; 53 FR 31681, Aug. 19, 1988]

§ 51.31 Determinations based on environmental assessment.

Upon completion of an environmental assessment, the appropriate NRC staff director will determine whether to prepare an environmental impact statement or a finding of no significant impact on the proposed action. As provided in § 51.33, a determination to prepare a draft finding of no significant impact may be made.

FINDING OF NO SIGNIFICANT IMPACT

§ 51.32 Finding of no significant impact.

(a) A finding of no significant impact will:

(1) Identify the proposed action;

(2) State that the Commission has determined not to prepare an environmental impact statement for the proposed action;

(3) Briefly present the reasons why the proposed action will not have a significant effect on the quality of the human environment;

(4) Include the environmental assessment or a summary of the environmental assessment. If the assessment is included, the finding need not repeat any of the discussion in the assessment but may incorporate it by reference;

(5) Note any other related environmental documents; and

(6) State that the finding and any related environmental documents are available for public inspection and where the documents may be inspected.

§ 51.33 Draft finding of no significant impact; distribution.

(a) As provided in paragraph (b) of this section, the appropriate NRC staff director may make a determination to prepare and issue a draft finding of no significant impact for public review and comment before making a final determination whether to prepare an environmental impact statement or a final finding of no significant impact on the proposed action.

(b) Circumstances in which a draft finding of no significant impact may be prepared will ordinarily include the following:

(1) A finding of no significant impact appears warranted for the proposed action but the proposed action is (i) closely similar to one which normally requires the preparation of an environmental impact statement, or (ii) without precedent; and

(2) The appropriate NRC staff director determines that preparation of a draft finding of no significant impact will further the purposes of NEPA.

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(c) A draft finding of no significant impact will (1) be marked "Draft", (2) contain the information specified in § 51.32, (3) be accompanied by or include a request for comments on the proposed action and on the draft finding within thirty (30) days, or such longer period as may be specified in the notice of the draft finding, and (4) be published in the FEDERAL REGISTER as required by §§ 51.35 and 51.119.

(d) A draft finding will be distributed as provided in § 51.74(a). Additional copies will be made available in accordance with § 51.123.

(e) When a draft finding of no significant impact is issued for a proposed action, a final determination to prepare an environmental impact statement or a final finding of no significant impact for that action shall not be made until the last day of the public comment period has expired.

§ 51.34 Preparation of finding of no significant impact.

(a) Except as provided in paragraph (b) of this section, the finding of no significant impact will be prepared by the NRC staff director authorized to take the action.

(b) When a hearing is held on the proposed action under the regulations in subpart G of part 2 of this chapter or when the action can only be taken by the Commissioners acting as a collegial body, the appropriate NRC staff director will prepare a proposed finding of no significant impact which may be subject to modification as a result of review and decision as appropriate to the nature and scope of the proceeding. In such cases, the presiding officer, the Atomic Safety and Licensing Appeal Board, or the Commission acting as a collegial body, as appropriate, will issue the final finding of no significant impact.

§ 51.35 Requirement to publish finding of no significant impact; limitation on Commission action.

(a) Whenever the Commission makes a draft or final finding of no significant impact on a proposed action, the finding will be published in the FEDERAL REGISTER as provided in § 51.119.

(b) Except as provided in § 51.13, the Commission shall not take the pro-

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posed action until after the final finding has been published in the FEDERAL REGISTER.

ENVIRONMENTAL REPORTS AND INFORMATION—REQUIREMENTS APPLICABLE TO APPLICANTS AND PETITIONERS FOR RULEMAKING

GENERAL

§ 51.40 Consultation with NRC staff.

(a) A prospective applicant or petitioner for rulemaking is encouraged to confer with NRC staff as early as possible in its planning process before submitting environmental information or filing an environmental report.

(b) Requests for guidance or information on environmental matters may include inquiries relating to:

(1) Applicable NRC rules and regulations;

(2) Format, content and procedures for filing environmental reports and other environmental information, including the type and quantity of environmental information likely to be needed to address issues and concerns identified in the scoping process described in § 51.29 in a manner appropriate to their relative significance;

(3) Availability of relevant environmental studies and environmental information;

(4) Need for, appropriate level and scope of any environmental studies or information which the Commission may require to be submitted in connection with an application or petition for rulemaking;

(5) Public meetings with NRC staff.

(c) Questions concerning environmental matters should be addressed to the following NRC staff offices as appropriate:

(1) *Utilization facilities*: Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-1270.

(2) *Production facilities*: Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-7800.

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(3) *Materials licenses*: Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-7800.

(4) *Rulemaking*: Director, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-6641.

(5) *General Environmental Matters*: Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-1700.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 13399, Apr. 25, 1988; 60 FR 24552, May 9, 1995]

§ 51.41 Requirement to submit environmental information.

The Commission may require an applicant for a permit, license, or other form of permission, or amendment to or renewal of a permit, license or other form of permission, or a petitioner for rulemaking to submit such information to the Commission as may be useful in aiding the Commission in complying with section 102(2) of NEPA. The Commission will independently evaluate and be responsible for the reliability of any information which it uses.

ENVIRONMENTAL REPORTS—GENERAL REQUIREMENTS

§ 51.45 Environmental report.

(a) *General*. As required by §§ 51.50, 51.53, 51.54, 51.60, 51.61, 51.62 or § 51.68, as appropriate, each applicant or petitioner for rulemaking shall submit with its application or petition for rulemaking one signed original of a separate document entitled “Applicant’s” or “Petitioner’s Environmental Report,” as appropriate, and the number of copies specified in §§ 51.55, 51.66 or § 51.69. An applicant or petitioner for rulemaking may submit a supplement to an environmental report at any time.

(b) *Environmental considerations*. The environmental report shall contain a description of the proposed action, a statement of its purposes, a description of the environment affected, and discuss the following considerations:

(1) The impact of the proposed action on the environment. Impacts shall be discussed in proportion to their significance;

(2) Any adverse environmental effects which cannot be avoided should the proposal be implemented;

(3) Alternatives to the proposed action. The discussion of alternatives shall be sufficiently complete to aid the Commission in developing and exploring, pursuant to section 102(2)(E) of NEPA, “appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” To the extent practicable, the environmental impacts of the proposal and the alternatives should be presented in comparative form;

(4) The relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity; and

(5) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

(c) *Analysis*. The environmental report shall include an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects. Except for environmental reports prepared at the license renewal stage pursuant to § 51.53(c), the analysis in the environmental report should also include consideration of the economic, technical, and other benefits and costs of the proposed action and of alternatives. Environmental reports prepared at the license renewal stage pursuant to § 51.53(c) need not discuss the economic or technical benefits and costs of either the proposed action or alternatives except insofar as such benefits and costs are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. In addition, environmental reports prepared pursuant to § 51.53(c) need not discuss other issues not related to the environmental effects of the proposed action and alternatives. The analyses

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for environmental reports shall, to the fullest extent practicable, quantify the various factors considered. To the extent that there are important qualitative considerations or factors that cannot be quantified, those considerations or factors shall be discussed in qualitative terms. The environmental report should contain sufficient data to aid the Commission in its development of an independent analysis.

(d) *Status of compliance.* The environmental report shall list all Federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements. The environmental report shall also include a discussion of the status of compliance with applicable environmental quality standards and requirements including, but not limited to, applicable zoning and land-use regulations, and thermal and other water pollution limitations or requirements which have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection. The discussion of alternatives in the report shall include a discussion of whether the alternatives will comply with such applicable environmental quality standards and requirements.

(e) *Adverse information.* The information submitted pursuant to paragraphs (b) through (d) of this section should not be confined to information supporting the proposed action but should also include adverse information.

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28486, June 5, 1996; 61 FR 66542, Dec. 18, 1996]

ENVIRONMENTAL REPORTS—PRODUCTION AND UTILIZATION FACILITIES

§ 51.50 Environmental report—construction permit stage.

Each applicant for a permit to construct a production or utilization facil-

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ity covered by § 51.20 shall submit with its application the number of copies, as specified in § 51.55, of a separate document, entitled “Applicant’s Environmental Report—Construction Permit Stage,” which shall contain the information specified in §§ 51.45, 51.51 and 51.52. Each environmental report shall identify procedures for reporting and keeping records of environmental data, and any conditions and monitoring requirements for protecting the non-aquatic environment, proposed for possible inclusion in the license as environmental conditions in accordance with § 50.36b of this chapter.

§ 51.51 Uranium fuel cycle environmental data—Table S-3.

(a) Every environmental report prepared for the construction permit stage of a light-water-cooled nuclear power reactor, and submitted on or after September 4, 1979, shall take Table S-3, Table of Uranium Fuel Cycle Environmental Data, as the basis for evaluating the contribution of the environmental effects of uranium mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, transportation of radioactive materials and management of low level wastes and high level wastes related to uranium fuel cycle activities to the environmental costs of licensing the nuclear power reactor. Table S-3 shall be included in the environmental report and may be supplemented by a discussion of the environmental significance of the data set forth in the table as weighed in the analysis for the proposed facility.

(b) Table S-3.

TABLE S-3—TABLE OF URANIUM FUEL CYCLE ENVIRONMENTAL DATA ¹
 [Normalized to model LWR annual fuel requirement [WASH-1248] or reference reactor year [NUREG-0116]]
 [See footnotes at end of this table]

Environmental considerations	Total	Maximum effect per annual fuel requirement or reference reactor year of model 1,000 MWe LWR
NATURAL RESOURCE USE		
Land (acres):		
Temporarily committed ²	100	
Undisturbed area	79	
Disturbed area	22	Equivalent to a 110 MWe coal-fired power plant.
Permanently committed	13	
Overburden moved (millions of MT)	2.8	Equivalent to 95 MWe coal-fired power plant.
Water (millions of gallons):		
Discharged to air	160	=2 percent of model 1,000 MWe LWR with cooling tower.
Discharged to water bodies	11,090	
Discharged to ground	127	
Total	11,377	<4 percent of model 1,000 MWe LWR with once-through cooling.
Fossil fuel:		
Electrical energy (thousands of MW-hour)	323	<5 percent of model 1,000 MWe LWR output.
Equivalent coal (thousands of MT)	118	Equivalent to the consumption of a 45 MWe coal-fired power plant.
Natural gas (millions of scf)	135	<0.4 percent of model 1,000 MWe energy output.
EFFLUENTS—CHEMICAL (MT)		
Gases (including entrainment): ³		
SO _x	4,400	
NO _x ⁴	1,190	Equivalent to emissions from 45 MWe coal-fired plant for a year.
Hydrocarbons	14	
CO	29.6	
Particulates	1,154	
Other gases:		
F .....	.67	Principally from UF ₆ production, enrichment, and reprocessing. Concentration within range of state standards—below level that has effects on human health.
HCl .....	.014	
Liquids:		
SO ₄ ⁻	9.9	From enrichment, fuel fabrication, and reprocessing steps. Components that constitute a potential for adverse environmental effect are present in dilute concentrations and receive additional dilution by receiving bodies of water to levels below permissible standards.
NO ₃ ⁻	25.8	
Fluoride	12.9	The constituents that require dilution and the flow of dilution water are: NH ₃ —600 cfs., NO ₃ —20 cfs., Fluoride—70 cfs.
Ca ⁺⁺	5.4	
C1 ⁻	8.5	
Na ⁺	12.1	
NH ₃	10.0	
Fe .....	.4	
Tailings solutions (thousands of MT)	240	From mills only—no significant effluents to environment.
Solids	91,000	Principally from mills—no significant effluents to environment.
Effluents—Radiological (curies)		
Gases (including entrainment):		
Rn-222		Presently under reconsideration by the Commission.
Ra-226 .....	.02	
Th-230 .....	.02	
Uranium .....	.034	
Tritium (thousands)	18.1	
C-14	24	
Kr-85 (thousands)	400	
Ru-106 .....	.14	Principally from fuel reprocessing plants.
I-129	1.3	
I-131 .....	.83	
Tc-99		Presently under consideration by the Commission.
Fission products and transuranics .....	.203	
Liquids:		
Uranium and daughters	2.1	Principally from milling—included tailings liquor and returned to ground—no effluents; therefore, no effect on environment.
Ra-226 .....	.0034	From UF ₆ production.

TABLE S-3—TABLE OF URANIUM FUEL CYCLE ENVIRONMENTAL DATA ¹—Continued
 [Normalized to model LWR annual fuel requirement [WASH-1248] or reference reactor year [NUREG-0116]
 [See footnotes at end of this table]

Environmental considerations	Total	Maximum effect per annual fuel requirement or reference reactor year of model 1,000 MWe LWR
Th-230 .....	.0015	
Th-234 .....	.01	From fuel fabrication plants—concentration 10 percent of 10 CFR 20 for total processing 26 annual fuel requirements for model LWR.
Fission and activation products	5.9×10 ⁻⁶	
Solids (buried on site):		
Other than high level (shallow)	11,300	9,100 Ci comes from low level reactor wastes and 1,500 Ci comes from reactor decontamination and decommissioning—buried at land burial facilities. 600 Ci comes from mills—included in tailings returned to ground. Approximately 60 Ci comes from conversion and spent fuel storage. No significant effluent to the environment.
TRU and HLW (deep)	1.1×10 ⁷	Buried at Federal Repository.
Effluents—thermal (billions of British thermal units)	4,063	<5 percent of model 1,000 MWe LWR.
Transportation (person-rem):		
Exposure of workers and general public	2.5	
Occupational exposure (person-rem)	22.6	From reprocessing and waste management.

¹ In some cases where no entry appears it is clear from the background documents that the matter was addressed and that, in effect, the Table should be read as if a specific zero entry had been made. However, there are other areas that are not addressed at all in the Table. Table S-3 does not include health effects from the effluents described in the Table, or estimates of releases of Radon-222 from the uranium fuel cycle or estimates of Technetium-99 released from waste management or reprocessing activities. These issues may be the subject of litigation in the individual licensing proceedings.

Data supporting this table are given in the "Environmental Survey of the Uranium Fuel Cycle," WASH-1248, April 1974; the "Environmental Survey of the Reprocessing and Waste Management Portion of the LWR Fuel Cycle," NUREG-0116 (Supp. 1 to WASH-1248); the "Public Comments and Task Force Responses Regarding the Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle," NUREG-0216 (Supp. 2 to WASH-1248); and in the record of the final rulemaking pertaining to Uranium Fuel Cycle Impacts from Spent Fuel Reprocessing and Radioactive Waste Management, Docket RM-50-3. The contributions from reprocessing, waste management and transportation of wastes are maximized for either of the two fuel cycles (uranium only and no recycle). The contribution from transportation excludes transportation of cold fuel to a reactor and of irradiated fuel and radioactive wastes from a reactor which are considered in Table S-4 of § 51.20(g). The contributions from the other steps of the fuel cycle are given in columns A-E of Table S-3A of WASH-1248.

² The contributions to temporarily committed land from reprocessing are not prorated over 30 years, since the complete temporary impact accrues regardless of whether the plant services one reactor for one year or 57 reactors for 30 years.

³ Estimated effluents based upon combustion of equivalent coal for power generation.

⁴ 1.2 percent from natural gas use and process.

[49 FR 9381, Mar. 12, 1984; 49 FR 10922, Mar. 23, 1984, as amended at 67 FR 77652, Dec. 19, 2002]

§ 51.52 Environmental effects of transportation of fuel and waste—Table S-4.

Every environmental report prepared for the construction permit stage of a light-water-cooled nuclear power reactor, and submitted after February 4, 1975, shall contain a statement concerning transportation of fuel and radioactive wastes to and from the reactor. That statement shall indicate that the reactor and this transportation either meet all of the conditions in paragraph (a) of this section or all of the conditions in paragraph (b) of this section.

(a)(1) The reactor has a core thermal power level not exceeding 3,800 megawatts;

(2) The reactor fuel is in the form of sintered uranium dioxide pellets having a uranium-235 enrichment not ex-

ceeding 4% by weight, and the pellets are encapsulated in zircaloy rods;

(3) The average level of irradiation of the irradiated fuel from the reactor does not exceed 33,000 megawatt-days per metric ton, and no irradiated fuel assembly is shipped until at least 90 days after it is discharged from the reactor;

(4) With the exception of irradiated fuel, all radioactive waste shipped from the reactor is packaged and in a solid form;

(5) Unirradiated fuel is shipped to the reactor by truck; irradiated fuel is shipped from the reactor by truck, rail, or barge; and radioactive waste other than irradiated fuel is shipped from the reactor by truck or rail; and

(6) The environmental impacts of transportation of fuel and waste to and

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from the reactor, with respect to normal conditions of transport and possible accidents in transport, are as set forth in Summary Table S-4 in paragraph (c) of this section; and the values in the table represent the contribution of the transportation to the environmental costs of licensing the reactor.

(b) For reactors not meeting the conditions of paragraph (a) of this section, the statement shall contain a full description and detailed analysis of the

environmental effects of transportation of fuel and wastes to and from the reactor, including values for the environmental impact under normal conditions of transport and for the environmental risk from accidents in transport. The statement shall indicate that the values determined by the analysis represent the contribution of such effects to the environmental costs of licensing the reactor.

(c)

SUMMARY TABLE S-4—ENVIRONMENTAL IMPACT OF TRANSPORTATION OF FUEL AND WASTE TO AND FROM ONE LIGHT-WATER-COOLED NUCLEAR POWER REACTOR ¹

Normal Conditions of Transport

	Environmental impact
Heat (per irradiated fuel cask in transit)	250,000 Btu/hr.
Weight (governed by Federal or State restrictions)	73,000 lbs. per truck; 100 tons per cask per rail car.
Traffic density:	
Truck	Less than 1 per day.
Rail	Less than 3 per month

Exposed population	Estimated number of persons exposed	Range of doses to exposed individuals ² (per reactor year)	Cumulative dose to exposed population (per reactor year) ³
Transportation workers	200	0.01 to 300 millirem	4 man-rem.
General public:			
Onlookers	1,100	0.003 to 1.3 millirem	3 man-rem.
Along Route	600,000	0.0001 to 0.06 millirem	

Accidents in Transport

	Environmental risk
Radiological effects	Small ⁴
Common (nonradiological) causes	1 fatal injury in 100 reactor years; 1 nonfatal injury in 10 reactor years; \$475 property damage per reactor year.

¹Data supporting this table are given in the Commission's "Environmental Survey of Transportation of Radioactive Materials to and from Nuclear Power Plants," WASH-1238, December 1972, and Supp. 1 NUREG-75/038 April 1975. Both documents are available for inspection and copying at the Commission's Public Document Room, 2120 L Street NW., Washington, DC and may be obtained from National Technical Information Service, Springfield, VA 22161. WASH-1238 is available from NTIS at a cost of \$5.45 (microfiche, \$2.25) and NUREG-75/038 is available at a cost of \$3.25 (microfiche, \$2.25).

²The Federal Radiation Council has recommended that the radiation doses from all sources of radiation other than natural background and medical exposures should be limited to 5,000 millirem per year for individuals as a result of occupational exposure and should be limited to 500 millirem per year for individuals in the general population. The dose to individuals due to average natural background radiation is about 130 millirem per year.

³Man-rem is an expression for the summation of whole body doses to individuals in a group. Thus, if each member of a population group of 1,000 people were to receive a dose of 0.001 rem (1 millirem), or if 2 people were to receive a dose of 0.5 rem (500 millirem) each, the total man-rem dose in each case would be 1 man-rem.

⁴Although the environmental risk of radiological effects stemming from transportation accidents is currently incapable of being numerically quantified, the risk remains small regardless of whether it is being applied to a single reactor or a multireactor site.

[49 FR 9381, Mar. 12, 1984; 49 FR 10922, Mar. 23, 1984, as amended at 53 FR 43420, Oct. 27, 1988]

§ 51.53 Postconstruction environmental reports.

(a) *General.* Any environmental report prepared under the provisions of this section may incorporate by reference any information contained in a prior environmental report or supplement thereto that relates to the production or utilization facility or any

information contained in a final environmental document previously prepared by the NRC staff that relates to the production or utilization facility. Documents that may be referenced include, but are not limited to, the final environmental impact statement; supplements to the final environmental

impact statement, including supplements prepared at the license renewal stage; NRC staff-prepared final generic environmental impact statements; and environmental assessments and records of decisions prepared in connection with the construction permit, the operating license, and any license amendment for that facility.

(b) *Operating license stage.* Each applicant for a license to operate a production or utilization facility covered by §51.20 shall submit with its application the number of copies specified in §51.55 of a separate document entitled “Supplement to Applicant’s Environmental Report—Operating License Stage,” which will update “Applicant’s Environmental Report—Construction Permit Stage.” Unless otherwise required by the Commission, the applicant for an operating license for a nuclear power reactor shall submit this report only in connection with the first licensing action authorizing full-power operation. In this report, the applicant shall discuss the same matters described in §§51.45, 51.51, and 51.52, but only to the extent that they differ from those discussed or reflect new information in addition to that discussed in the final environmental impact statement prepared by the Commission in connection with the construction permit. No discussion of need for power, or of alternative energy sources, or of alternative sites for the facility, or of any aspect of the storage of spent fuel for the facility within the scope of the generic determination in §51.23(a) and in accordance with §51.23(b) is required in this report.

(c) *Operating license renewal stage.* (1) Each applicant for renewal of a license to operate a nuclear power plant under part 54 of this chapter shall submit with its application the number of copies specified in §51.55 of a separate document entitled “Applicant’s Environmental Report—Operating License Renewal Stage.”

(2) The report must contain a description of the proposed action, including the applicant’s plans to modify the facility or its administrative control procedures as described in accordance with §54.21 of this chapter. This report must describe in detail the modifications directly affecting the en-

vironment or affecting plant effluents that affect the environment. In addition, the applicant shall discuss in this report the environmental impacts of alternatives and any other matters described in §51.45. The report is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action except insofar as such costs and benefits are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. The environmental report need not discuss other issues not related to the environmental effects of the proposed action and the alternatives. In addition, the environmental report need not discuss any aspect of the storage of spent fuel for the facility within the scope of the generic determination in §51.23(a) and in accordance with §51.23(b).

(3) For those applicants seeking an initial renewal license and holding either an operating license or construction permit as of June 30, 1995, the environmental report shall include the information required in paragraph (c)(2) of this section subject to the following conditions and considerations:

(i) The environmental report for the operating license renewal stage is not required to contain analyses of the environmental impacts of the license renewal issues identified as Category 1 issues in appendix B to subpart A of this part.

(ii) The environmental report must contain analyses of the environmental impacts of the proposed action, including the impacts of refurbishment activities, if any, associated with license renewal and the impacts of operation during the renewal term, for those issues identified as Category 2 issues in appendix B to subpart A of this part. The required analyses are as follows:

(A) If the applicant’s plant utilizes cooling towers or cooling ponds and withdraws make-up water from a river whose annual flow rate is less than 3.15×10^{12} ft³/year (9×10^{10} m³/year), an assessment of the impact of the proposed action on the flow of the river and related impacts on instream and riparian

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ecological communities must be provided. The applicant shall also provide an assessment of the impacts of the withdrawal of water from the river on alluvial aquifers during low flow.

(B) If the applicant's plant utilizes once-through cooling or cooling pond heat dissipation systems, the applicant shall provide a copy of current Clean Water Act 316(b) determinations and, if necessary, a 316(a) variance in accordance with 40 CFR part 125, or equivalent State permits and supporting documentation. If the applicant can not provide these documents, it shall assess the impact of the proposed action on fish and shellfish resources resulting from heat shock and impingement and entrainment.

(C) If the applicant's plant uses Ranney wells or pumps more than 100 gallons (total onsite) of ground water per minute, an assessment of the impact of the proposed action on ground-water use must be provided.

(D) If the applicant's plant is located at an inland site and utilizes cooling ponds, an assessment of the impact of the proposed action on groundwater quality must be provided.

(E) All license renewal applicants shall assess the impact of refurbishment and other license-renewal-related construction activities on important plant and animal habitats. Additionally, the applicant shall assess the impact of the proposed action on threatened or endangered species in accordance with the Endangered Species Act.

(F) If the applicant's plant is located in or near a nonattainment or maintenance area, an assessment of vehicle exhaust emissions anticipated at the time of peak refurbishment workforce must be provided in accordance with the Clean Air Act as amended.

(G) If the applicant's plant uses a cooling pond, lake, or canal or discharges into a river having an annual average flow rate of less than 3.15×10^{12} ft³/year (9×10^{10} m³/year), an assessment of the impact of the proposed action on public health from thermophilic organisms in the affected water must be provided.

(H) If the applicant's transmission lines that were constructed for the specific purpose of connecting the plant to the transmission system do not meet

the recommendations of the National Electric Safety Code for preventing electric shock from induced currents, an assessment of the impact of the proposed action on the potential shock hazard from the transmission lines must be provided.

(I) An assessment of the impact of the proposed action on housing availability, land-use, and public schools (impacts from refurbishment activities only) within the vicinity of the plant must be provided. Additionally, the applicant shall provide an assessment of the impact of population increases attributable to the proposed project on the public water supply.

(J) All applicants shall assess the impact of highway traffic generated by the proposed project on the level of service of local highways during periods of license renewal refurbishment activities and during the term of the renewed license.

(K) All applicants shall assess whether any historic or archaeological properties will be affected by the proposed project.

(L) If the staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided.

(M) [Reserved]

(iii) The report must contain a consideration of alternatives for reducing adverse impacts, as required by §51.45(c), for all Category 2 license renewal issues in appendix B to subpart A of this part. No such consideration is required for Category 1 issues in appendix B to subpart A of this part.

(iv) The environmental report must contain any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware.

(d) *Postoperating license stage.* Each applicant for a license amendment authorizing decommissioning activities for a production or utilization facility either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license amendment approving a license termination plan or decommissioning

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plan under § 50.82 of this chapter either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license or license amendment to store spent fuel at a nuclear power reactor after expiration of the operating license for the nuclear power reactor shall submit with its application the number of copies, as specified in § 51.55, of a separate document, entitled "Supplement to Applicant's Environmental Report—Post Operating License Stage," which will update "Applicant's Environmental Report—Operating License Stage," as appropriate, to reflect any new information or significant environmental change associated with the applicant's proposed decommissioning activities or with the applicant's proposed activities with respect to the planned storage of spent fuel. Unless otherwise required by the Commission, in accordance with the generic determination in § 51.23(a) and the provisions in § 51.23(b), the applicant shall only address the environmental impact of spent fuel storage for the term of the license applied for. The "Supplement to Applicant's Environmental Report—Post Operating License Stage" may incorporate by reference any information contained in "Applicants Environmental Report—Construction Permit Stage.

[61 FR 66543, Dec. 18, 1996, as amended at 64 FR 48506, Sept. 3, 1999]

§ 51.54 Environmental report—manufacturing license.

Each applicant for a license to manufacture a nuclear power reactor or, for an amendment to a license to manufacture seeking approval of the final design of the nuclear power reactor, pursuant to appendix M of part 52 of this chapter, shall submit with its application, as specified in § 50.4, a separate document, entitled "Applicant's Environmental Report—Manufacturing License," or "Supplement to Applicant's Environmental Report—Manufacturing License." The environmental report shall address the environmental matters specified in appendix M of part 52 of this chapter, and shall contain the

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information specified in § 51.45, as appropriate.

[51 FR 40311, Nov. 6, 1986, as amended at 54 FR 15398, Apr. 18, 1989]

§ 51.55 Environmental report—number of copies; distribution.

(a) Each applicant for a license to construct and operate a production or utilization facility covered by paragraphs (b)(1), (b)(2), (b)(3), or (b)(4) of § 51.20, each applicant for renewal of an operating license for a nuclear power plant, each applicant for a license amendment authorizing the decommissioning of a production or utilization facility covered by § 51.20, and each applicant for a license or license amendment to store spent fuel at a nuclear power plant after expiration of the operating license for the nuclear power plant shall submit to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as appropriate, 41 copies of an environmental report or any supplement to an environmental report. The applicant shall retain an additional 109 copies of the environmental report or any supplement to the environmental report for distribution to parties and Boards in the NRC proceedings; Federal, State, and local officials; and any affected Indian tribes, in accordance with written instructions issued by the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as appropriate.

(b) Each applicant for a license to manufacture a nuclear power reactor, or for an amendment to a license to manufacture seeking approval of the final design of the nuclear power reactor, pursuant to appendix M of part 52 of this chapter shall submit to the Commission an environmental report or any supplement to an environmental report in the manner specified in § 50.4. The applicant shall retain an additional 109 copies of the environmental report or any supplement to the environmental report for distribution to parties and Boards in the NRC proceeding, Federal, State, and local officials and any affected Indian tribes, in accordance with written instructions

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issued by the Director of Nuclear Reactor Regulation.

[51 FR 40311, Nov. 6, 1986, as amended at 53 FR 24052, June 27, 1988; 54 FR 15398, Apr. 18, 1989; 61 FR 28488, June 5, 1996; 61 FR 66544, Dec. 18, 1996; 62 FR 59276, Nov. 3, 1997]

ENVIRONMENTAL REPORTS—MATERIALS LICENSES

§ 51.60 Environmental report—materials licenses.

(a) Each applicant for a license or other form of permission, or an amendment to or renewal of a license or other form of permission issued pursuant to parts 30, 32, 33, 34, 35, 36, 39, 40, 61, 70 and/or 72 of this chapter, and covered by paragraphs (b)(1) through (b)(5) of this section, shall submit with its application to the Director of Nuclear Material Safety and Safeguards the number of copies, as specified in § 51.66, of a separate document, entitled “Applicant’s Environmental Report” or “Supplement to Applicant’s Environmental Report,” as appropriate. The “Applicant’s Environmental Report” shall contain the information specified in § 51.45. If the application is for an amendment to or a renewal of a license or other form of permission for which the applicant has previously submitted an environmental report, the supplement to applicant’s environmental report may be limited to incorporating by reference, updating or supplementing the information previously submitted to reflect any significant environmental change, including any significant environmental change resulting from operational experience or a change in operations or proposed decommissioning activities. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate.

(b) As required by paragraph (a) of this section, each applicant shall prepare an environmental report for the following types of actions:

(1) Issuance or renewal of a license or other form of permission for:

(i) Possession and use of special nuclear material for processing and fuel

fabrication, scrap recovery, or conversion of uranium hexafluoride pursuant to part 70 of this chapter.

(ii) Possession and use of source material for uranium milling or production of uranium hexafluoride pursuant to part 40 of this chapter.

(iii) Storage of spent fuel in an independent spent fuel storage installation (ISFSI) or the storage of spent fuel or high-level radio-active waste in a monitored retrievable storage installation (MRS) pursuant to part 72 of this chapter.

(iv) Receipt and disposal of radio-active waste from other persons pursuant to part 61 of this chapter.

(v) Processing of source material for extraction of rare earth and other metals.

(vi) Use of radioactive tracers in field flood studies involving secondary and tertiary oil and gas recovery.

(vii) Construction and operation of a uranium enrichment facility.

(2) Issuance of an amendment that would authorize or result in (i) a significant expansion of a site, (ii) a significant change in the types of effluents, (iii) a significant increase in the amounts of effluents, (iv) a significant increase in individual or cumulative occupational radiation exposure, (v) a significant increase in the potential for or consequences from radiological accidents, or (vi) a significant increase in spent fuel storage capacity, in a license or other form of permission to conduct an activity listed in paragraph (b)(1) of this section.

(3) Amendment of a license to authorize the decommissioning of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) pursuant to part 72 of this chapter.

(4) Issuance of a license amendment pursuant to part 61 of this chapter authorizing (i) closure of a land disposal site, (ii) transfer of the license to the disposal site owner for the purpose of institutional control, or (iii) termination of the license at the end of the institutional control period.

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(5) Any other licensing action for which the Commission determines an Environmental Report is necessary.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 31681, Aug. 19, 1988; 57 FR 18392, Apr. 30, 1992; 58 FR 7737, Feb. 9, 1993; 62 FR 26732, May 14, 1997]

§ 51.61 Environmental report— independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS) license.

Each applicant for issuance of a license for storage of spent fuel in an independent spent fuel storage installation (ISFSI) or for the storage of spent fuel and high-level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to part 72 of this chapter shall submit with its application to the Director of Nuclear Material Safety and Safeguards the number of copies, as specified in § 51.66 of a separate document entitled “Applicant’s Environmental Report—ISFSI License” or “Applicant’s Environmental Report—MRS License,” as appropriate. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate. The environmental report shall contain the information specified in § 51.45 and shall address the siting evaluation factors contained in subpart E of part 72 of this chapter. Unless otherwise required by the Commission, in accordance with the generic determination in § 51.23(a) and the provisions in § 51.23(b), no discussion of the environmental impact of the storage of spent fuel at an ISFSI beyond the term of the license or amendment applied for is required in an environmental report submitted by an applicant for an initial license for storage of spent fuel in an ISFSI, or any amendment thereto.

[53 FR 31681, Aug. 19, 1988]

§ 51.62 Environmental report—land disposal of radioactive waste licensed under 10 CFR part 61.

(a) Each applicant for issuance of a license for land disposal of radioactive waste pursuant to part 61 of this chapter shall submit with its application to

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the Director of Nuclear Material Safety and Safeguards the number of copies, as specified in § 51.66 of a separate document, entitled “Applicant’s Environmental Report—License for Land Disposal of Radioactive Waste.” The environmental report and any supplement to the environmental report may incorporate by reference information contained in the application or in any previous application, statement or report filed with the Commission provided that such references are clear and specific and that copies of the information so incorporated are available at the NRC Web site, <http://www.nrc.gov>, and/or at the NRC Public Document Room.

(b) The environmental report shall contain the information specified in § 51.45, shall address the applicant’s environmental monitoring program required by §§ 61.12(1), 61.53 and 61.59(b) of this chapter, and shall be as complete as possible in the light of information that is available at the time the environmental report is submitted.

(c) The applicant shall supplement the environmental report in a timely manner as necessary to permit the Commission to review, prior to issuance, amendment or renewal of a license, new information regarding the environmental impact of previously proposed activities, information regarding the environmental impact of any changes in previously proposed activities, or any significant new information regarding the environmental impact of closure activities and long-term performance of the disposal site.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 43420, Oct. 27, 1988; 64 FR 48952, Sept. 9, 1999]

§ 51.66 Environmental report—number of copies; distribution.

(a) Each applicant for a license or other form of permission, or an amendment to or renewal of a license or other form of permission issued pursuant to parts 30, 32, 33, 34, 35, 36, 39, 40, 61, 70 and/or 72 of this chapter, and covered by paragraphs (b) (1) through (6) of § 51.60; or by § 51.61 or § 51.62 shall submit to the Director of Nuclear Material Safety and Safeguards an environmental report or any supplement to an environmental report in the number of

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copies specified. The applicant shall retain additional copies of the environmental report or any supplement to the environmental report in the number of copies specified for distribution to Federal, State, and local officials and any affected Indian tribes in accordance with written instructions issued by the Director of Nuclear Material Safety and Safeguards.

(b)

ENVIRONMENTAL REPORT

Type of licensing action	Number of copies to be submitted with application	Number of copies to be retained by applicant for subsequent distribution
Licensing actions requiring environmental impact statements pursuant to § 51.20(b).	25 copies	125 copies.
Licensing actions requiring environmental assessments pursuant to § 51.21.	15 copies	None.

[49 FR 9381, Mar. 12, 1984, as amended at 52 FR 8241, Mar. 17, 1987; 58 FR 7737, Feb. 9, 1993]

§ 51.67 Environmental information concerning geologic repositories.

(a) In lieu of an environmental report, the Department of Energy, as an applicant for a license or license amendment pursuant to part 60 or 63 of this chapter, shall submit to the Commission any final environmental impact statement which the Department prepares in connection with any geologic repository developed under Subtitle A of Title I, or under Title IV, of the Nuclear Waste Policy Act of 1982, as amended. (See § 60.22 or § 63.22 of this chapter as to the required time and manner of submission.) The statement shall include, among the alternatives under consideration, denial of a license or construction authorization by the Commission.

(b) Under applicable provisions of law, the Department of Energy may be required to supplement its final environmental impact statement if it makes a substantial change in its proposed action that is relevant to environmental concerns or determines that there are significant new circumstances or information relevant to

environmental concerns and bearing on the proposed action or its impacts. The Department shall submit any supplement to its final environmental impact statement to the Commission. (See § 60.22 or § 63.22 of this chapter as to the required time and manner of submission.)

(c) Whenever the Department of Energy submits a final environmental impact statement, or a final supplement to an environmental impact statement, to the Commission pursuant to this section, it shall also inform the Commission of the status of any civil action for judicial review initiated pursuant to section 119 of the Nuclear Waste Policy Act of 1982. This status report, which the Department shall update from time to time to reflect changes in status, shall:

(1) State whether the environmental impact statement has been found by the courts of the United States to be adequate or inadequate; and

(2) Identify any issues relating to the adequacy of the environmental impact statement that may remain subject to judicial review.

[54 FR 27870, July 3, 1989, as amended at 66 FR 55791, Nov. 2, 2001]

ENVIRONMENTAL REPORTS—RULEMAKING

§ 51.68 Environmental report—rule-making.

Petitioners for rulemaking requesting amendments of parts 30, 31, 32, 33, 34, 35, 36, 39, 40 or part 70 of this chapter concerning the exemption from licensing and regulatory requirements of or authorizing general licenses for any equipment, device, commodity or other product containing byproduct material, source material or special nuclear material shall submit with the petition the number of copies, as specified in § 51.69, of a separate document entitled "Petitioner's Environmental Report," which shall contain the information specified in § 51.45.

[49 FR 9381, Mar. 12, 1984, as amended at 52 FR 8241, Mar. 17, 1987; 58 FR 7737, Feb. 9, 1993]

§ 51.69 Environmental report—number of copies.

Petitioners for rulemaking covered by § 51.68 shall submit fifty (50) copies

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of an environmental report or any supplement to an environmental report.

ENVIRONMENTAL IMPACT STATEMENTS

DRAFT ENVIRONMENTAL IMPACT STATEMENTS—GENERAL REQUIREMENTS

§51.70 Draft environmental impact statement—general.

(a) The NRC staff will prepare a draft environmental impact statement as soon as practicable after publication of the notice of intent to prepare an environmental impact statement and completion of the scoping process. To the fullest extent practicable, environmental impact statements will be prepared concurrently or integrated with environmental impact analyses and related surveys and studies required by other Federal law.

(b) The draft environmental impact statement will be concise, clear and analytic, will be written in plain language with appropriate graphics, will state how alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of NEPA and of any other relevant and applicable environmental laws and policies, will identify any methodologies used and sources relied upon, and will be supported by evidence that the necessary environmental analyses have been made. The format provided in section 1(a) of appendix A of this subpart should be used. The NRC staff will independently evaluate and be responsible for the reliability of all information used in the draft environmental impact statement.

(c) The Commission will cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and State and local requirements, in accordance with 40 CFR 1506.2 (b) and (c).

§51.71 Draft environmental impact statement—contents.

(a) *Scope.* The draft environmental impact statement will be prepared in accordance with the scope decided upon in the scoping process required by §§51.26 and 51.29. As appropriate and to the extent required by the scope, the draft statement will address the topics in paragraphs (b), (c), (d) and (e) of this section and the matters specified in

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§§51.45, 51.50, 51.51, 51.52, 51.53, 51.54, 51.61 and 51.62.

(b) *Analysis of major points of view.* To the extent sufficient information is available, the draft environmental impact statement will include consideration of major points of view concerning the environmental impacts of the proposed action and the alternatives, and contain an analysis of significant problems and objections raised by other Federal, State, and local agencies, by any affected Indian tribes, and by other interested persons.

(c) *Status of compliance.* The draft environmental impact statement will list all Federal permits, licenses, approvals, and other entitlements which must be obtained in implementing the proposed action and will describe the status of compliance with those requirements. If it is uncertain whether a Federal permit, license, approval, or other entitlement is necessary, the draft environmental impact statement will so indicate.

(d) *Analysis.* The draft environmental impact statement will include a preliminary analysis that considers and weighs the environmental effects of the proposed action; the environmental impacts of alternatives to the proposed action; and alternatives available for reducing or avoiding adverse environmental effects. Except for supplemental environmental impact statements for the operating license renewal stage prepared pursuant to §51.95(c), draft environmental impact statements should also include consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives and indicate what other interests and considerations of Federal policy, including factors not related to environmental quality if applicable, are relevant to the consideration of environmental effects of the proposed action identified pursuant to paragraph (a) of this section. Supplemental environmental impact statements prepared at the license renewal stage pursuant to §51.95(c) need not discuss the economic or technical benefits and costs of either the proposed action or alternatives except insofar as such benefits and costs are either essential for a determination regarding the inclusion of an alternative

in the range of alternatives considered or relevant to mitigation. In addition, the supplemental environmental impact statement prepared at the license renewal stage need not discuss other issues not related to the environmental effects of the proposed action and associated alternatives. The draft supplemental environmental impact statement for license renewal prepared pursuant to §51.95(c) will rely on conclusions as amplified by the supporting information in the GEIS for issues designated as Category 1 in appendix B to subpart A of this part. The draft supplemental environmental impact statement must contain an analysis of those issues identified as Category 2 in appendix B to subpart A of this part that are open for the proposed action. The analysis for all draft environmental impact statements will, to the fullest extent practicable, quantify the various factors considered. To the extent that there are important qualitative considerations or factors that cannot be quantified, these considerations or factors will be discussed in qualitative terms. Due consideration will be given to compliance with environmental quality standards and requirements that have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection, including applicable zoning and land-use regulations and water pollution limitations or requirements promulgated or imposed pursuant to the Federal Water Pollution Control Act. The environmental impact of the proposed action will be considered in the analysis with respect to matters covered by such standards and requirements irrespective of whether a certification or license from the appropriate authority has been obtained.³ While

³Compliance with the environmental quality standards and requirements of the Federal Water Pollution Control Act (imposed by EPA or designated permitting states) is not a substitute for and does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality, and to consider alternatives to the proposed action that are available for reducing adverse effects. Where an environmental assessment of aquatic impact from plant discharges is available from the permitting authority, the NRC will consider the assess-

satisfaction of Commission standards and criteria pertaining to radiological effects will be necessary to meet the licensing requirements of the Atomic Energy Act, the analysis will, for the purposes of NEPA, consider the radiological effects of the proposed action and alternatives.

(e) *Preliminary recommendation.* The draft environmental impact statement normally will include a preliminary recommendation by the NRC staff respecting the proposed action. This preliminary recommendation will be based on the information and analysis described in paragraphs (a) through (d) of this section and §§51.75, 51.76, 51.80, 51.85, and 51.95, as appropriate, and will be reached after considering the environmental effects of the proposed action and reasonable alternatives,⁴ and, except for supplemental environmental impact statements for the operating license renewal stage prepared pursuant to §51.95(c), after weighing the costs and benefits of the proposed action. In lieu of a recommendation, the NRC

ment in its determination of the magnitude of environmental impacts for striking an overall cost-benefit balance at the construction permit and operating license stages, and in its determination of whether the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable at the license renewal stage. When no such assessment of aquatic impacts is available from the permitting authority, NRC will establish on its own or in conjunction with the permitting authority and other agencies having relevant expertise the magnitude of potential impacts for striking an overall cost-benefit balance for the facility at the construction permit and operating license stages, and in its determination of whether the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable at the license renewal stage.

⁴The consideration of reasonable alternatives to a proposed action involving nuclear power reactors (e.g., alternative energy sources) is intended to assist the NRC in meeting its NEPA obligations and does not preclude any State authority from making separate determinations with respect to these alternatives and in no way preempts, displaces, or affects the authority of States or other Federal agencies to address these issues.

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staff may indicate in the draft statement that two or more alternatives remain under consideration.

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28488, June 5, 1996; 61 FR 66544, Dec. 18, 1996]

§51.72 Supplement to draft environmental impact statement.

(a) The NRC staff will prepare a supplement to a draft environmental impact statement for which a notice of availability has been published in the FEDERAL REGISTER as provided in §51.117, if:

(1) There are substantial changes in the proposed action that are relevant to environmental concerns; or

(2) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(b) The NRC staff may prepare a supplement to a draft environmental impact statement when, in its opinion, preparation of a supplement will further the purposes of NEPA.

(c) The supplement to a draft environmental impact statement will be prepared and noticed in the same manner as the draft environmental impact statement except that a scoping process need not be used.

§51.73 Request for comments on draft environmental impact statement.

Each draft environmental impact statement and each supplement to a draft environmental impact statement distributed in accordance with §51.74, and each news release provided pursuant to §51.74(d) will be accompanied by or include a request for comments on the proposed action and on the draft environmental impact statement or any supplement to the draft environmental impact statement and will state where comments should be submitted and the date on which the comment period closes. A minimum comment period of 45 days will be provided. The comment period will be calculated from the date on which the Environmental Protection Agency notice stating that the draft statement or the supplement to the draft statement has been filed with EPA is published in the FEDERAL REGISTER. If no comments are provided within the time specified, it

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will be presumed, unless the agency or person requests an extension of time, that the agency or person has no comment to make. To the extent practicable, NRC staff will grant reasonable requests for extensions of time of up to fifteen (15) days.

§51.74 Distribution of draft environmental impact statement and supplement to draft environmental impact statement; news releases.

(a) A copy of the draft environmental impact statement will be distributed to:

(1) The Environmental Protection Agency.

(2) Any other Federal agency which has special expertise or jurisdiction by law with respect to any environmental impact involved or which is authorized to develop and enforce relevant environmental standards.

(3) The applicant or petitioner for rulemaking and any other party to the proceeding.

(4) Appropriate State and local agencies authorized to develop and enforce relevant environmental standards.

(5) Appropriate State, regional and metropolitan clearinghouses.

(6) Appropriate Indian tribes when the proposed action may have an environmental impact on a reservation.

(7) Upon written request, any organization or group included in the master list of interested organizations and groups maintained under §51.122.

(8) Upon written request, any other person to the extent available.

(b) Additional copies will be made available in accordance with §51.123.

(c) A supplement to a draft environmental impact statement will be distributed in the same manner as the draft environmental impact statement to which it relates.

(d) News releases stating the availability for comment and place for obtaining or inspecting a draft environmental statement or supplement will be provided to local newspapers and other appropriate media.

(e) A notice of availability will be published in the FEDERAL REGISTER in accordance with §51.117.

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DRAFT ENVIRONMENTAL IMPACT STATEMENTS—PRODUCTION AND UTILIZATION FACILITIES

§ 51.75 Draft environmental impact statement—construction permit.

A draft environmental impact statement relating to issuance of a construction permit for a production or utilization facility will be prepared in accordance with the procedures and measures described in §§ 51.70, 51.71, 51.72 and 51.73. The contribution of the environmental effects of the uranium fuel cycle activities specified in § 51.51 shall be evaluated on the basis of impact values set forth in Table S-3, Table of Uranium Fuel Cycle Environmental Data, which shall be set out in the draft environmental impact statement. With the exception of radon-222 and technetium-99 releases, no further discussion of fuel cycle release values and other numerical data that appear explicitly in the Table shall be required.⁵ The impact statement shall take account of dose commitments and health effects from fuel cycle effluents set forth in Table S-3 and shall in addition take account of economic, socioeconomic, and possible cumulative impacts and such other fuel cycle impacts as may reasonably appear significant.

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28489, June 5, 1996]

§ 51.76 Draft environmental impact statement—manufacturing license.

A draft environmental impact statement relating to issuance of a license to manufacture a nuclear power reactor will address the environmental matters specified in appendix M of part 52 of this chapter. The draft environmental impact statement will include a request for comments as provided in § 51.73.

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 15398, Apr. 18, 1989]

⁵ Values for releases of Rn-222 and Tc-99 are not given in the Table. The amount and significance of Rn-222 releases from the fuel cycle and Tc-99 releases from waste management or reprocessing activities shall be considered in the draft environmental impact statement and may be the subject of litigation in individual licensing proceedings.

§ 51.77 Distribution of draft environmental impact statement.

(a) In addition to the distribution authorized by § 51.74, a copy of a draft environmental statement for a licensing action for a production or utilization facility, except an action authorizing issuance, amendment or renewal of a license to manufacture a nuclear power reactor pursuant to 10 CFR part 52, appendix M will also be distributed to:

(1) The chief executive of the municipality or county identified in the draft environmental impact statement as the preferred site for the proposed facility or activity.

(2) Upon request, the chief executive of each municipality or county identified in the draft environmental impact statement as an alternative site.

(b) Additional copies will be made available in accordance with § 51.123.

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 15398, Apr. 18, 1989]

DRAFT ENVIRONMENTAL IMPACT STATEMENTS—MATERIALS LICENSES

§ 51.80 Draft environmental impact statement—materials license.

(a) The NRC staff will either prepare a draft environmental impact statement or as provided in § 51.92, a supplement to a final environmental impact statement for each type of action identified in § 51.20(b) (7) through (12). Except as the context may otherwise require, procedures and measures similar to those described in §§ 51.70, 51.71, 51.72 and 51.73 will be followed.

(b)(1) *Independent spent fuel storage installation (ISFSI)*. Unless otherwise determined by the Commission and in accordance with the generic determination in § 51.23(a) and the provisions of § 51.23(b), a draft environmental impact statement on the issuance of an initial license for storage of spent fuel at an independent spent fuel storage installation (ISFSI) or any amendment thereto, will address environmental impacts of spent fuel only for the term of the license or amendment applied for.

(2) *Monitored retrievable storage installation (MRS)*. As provided in sections 141 (c), (d), and (e) and 148 (a) and (c) of the Nuclear Waste Policy Act of 1982, as amended (NWPA) (96 Stat. 2242, 2243,

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42 U.S.C. 10161 (c), (d), (e); 101 Stat. 1330-235, 1330-236, 42 U.S.C. 10168 (a) and (c)), a draft environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPA (96 Stat. 2242, 42 U.S.C. 10161(b)(1)) but may consider alternative facility designs which are consistent with these design criteria.

[49 FR 34695, Aug. 31, 1984, as amended at 53 FR 31682, Aug. 19, 1988]

§51.81 Distribution of draft environmental impact statement.

Copies of the draft environmental impact statement and any supplement to the draft environmental impact statement will be distributed in accordance with the provisions of §51.74.

DRAFT ENVIRONMENTAL IMPACT STATEMENTS—RULEMAKING

§51.85 Draft environmental impact statement—rulemaking.

Except as the context may otherwise require, procedures and measures similar to those described in §§51.70, 51.71, 51.72 and 51.73 will be followed in proceedings for rulemaking for which the Commission has determined to prepare an environmental impact statement.

§51.86 Distribution of draft environmental impact statement.

Copies of the draft environmental impact statement and any supplement to the draft environmental impact statement will be distributed in accordance with the provisions of §51.74.

LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENTS—PROPOSALS FOR LEGISLATION

§51.88 Proposals for legislation.

The Commission will, as a matter of policy, follow the provisions of 40 CFR 1506.8 regarding the NEPA process for proposals for legislation.

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FINAL ENVIRONMENTAL IMPACT STATEMENTS—GENERAL REQUIREMENTS

§51.90 Final environmental impact statement—general.

After receipt and consideration of comments requested pursuant to §§51.73 and 51.117, the NRC staff will prepare a final environmental impact statement in accordance with the requirements in §§51.70(b) and 51.71 for a draft environmental impact statement. The format provided in section 1(a) of appendix A of this subpart should be used.

§51.91 Final environmental impact statement—contents.

(a)(1) The final environmental impact statement will include responses to any comments on the draft environmental impact statement or on any supplement to the draft environmental impact statement. Responses to comments may include:

- (i) Modification of alternatives, including the proposed action;
- (ii) Development and evaluation of alternatives not previously given serious consideration;
- (iii) Supplementation or modification of analyses;
- (iv) Factual corrections;
- (v) Explanation of why comments do not warrant further response, citing sources, authorities or reasons which support this conclusion.

(2) All substantive comments received on the draft environmental impact statement or any supplement to the draft environmental impact statement (or summaries thereof where the response has been exceptionally voluminous) will be attached to the final statement, whether or not each comment is discussed individually in the text of the statement.

(3) If changes in the draft environmental impact statement in response to comments are minor and are confined either to factual corrections or to explanations of why the comments do not warrant further response, the changes may be made by attaching errata sheets to the draft statement. The entire document with a new cover may

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then be issued as the final environmental impact statement.

(b) The final environmental impact statement will discuss any relevant responsible opposing view not adequately discussed in the draft environmental impact statement or in any supplement to the draft environmental impact statement, and respond to the issues raised.

(c) The final environmental impact statement will state how the alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of NEPA and of any other relevant and applicable environmental laws and policies.

(d) The final environmental impact statement will include a final analysis and a final recommendation on the action to be taken.

§ 51.92 Supplement to the final environmental impact statement.

(a) If the proposed action has not been taken, the NRC staff will prepare a supplement to a final environmental impact statement for which a notice of availability has been published in the FEDERAL REGISTER as provided in § 51.118, if:

(1) There are substantial changes in the proposed action that are relevant to environmental concerns; or

(2) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(b) The NRC staff may prepare a supplement to a final environmental impact statement when, in its opinion, preparation of a supplement will further the purposes of NEPA.

(c) The supplement to a final environmental impact statement will be prepared in the same manner as the final environmental impact statement except that a scoping process need not be used.

(d)(1) A supplement to a final environmental impact statement will be accompanied by or will include a request for comments as provided in § 51.73 and a notice of availability will be published in the FEDERAL REGISTER as provided in § 51.117 if the conditions described in paragraph (a) of this section apply.

(2) If comments are not requested, a notice of availability of a supplement to a final environmental impact statement will be published in the FEDERAL REGISTER as provided in § 51.118.

§ 51.93 Distribution of final environmental impact statement and supplement to final environmental impact statement; news releases.

(a) A copy of the final environmental impact statement will be distributed to:

(1) The Environmental Protection Agency.

(2) The applicant or petitioner for rulemaking and any other party to the proceeding.

(3) Appropriate State, regional and metropolitan clearinghouses.

(4) Each commenter.

(b) Additional copies will be made available in accordance with § 51.123.

(c) If the final environmental impact statement is unusually long or there are so many comments on a draft environmental impact statement or any supplement to a draft environmental impact statement that distribution of the entire final statement to all commenters is impracticable, a summary of the final statement and the substantive comments will be distributed. When the final environmental impact statement has been prepared by adding errata sheets to the draft environmental impact statement as provided in § 51.91(a)(3), only the comments, the responses to the comments and the changes to the environmental impact statement will be distributed.

(d) A supplement to a final environmental impact statement will be distributed in the same manner as the final environmental impact statement to which it relates.

(e) News releases stating the availability and place for obtaining or inspecting a final environmental impact statement or supplement will be provided to local newspapers and other appropriate media.

(f) A notice of availability will be published in the FEDERAL REGISTER in accordance with § 51.118.

§ 51.94 Requirement to consider final environmental impact statement.

The final environmental impact statement, together with any comments and any supplement, will accompany the application or petition for rulemaking through, and be considered in, the Commission's decisionmaking process. The final environmental impact statement, together with any comments and any supplement, will be made a part of the record of the appropriate adjudicatory or rulemaking proceeding.

FINAL ENVIRONMENTAL IMPACT
STATEMENTS—PRODUCTION AND UTILI-
ZATION FACILITIES

§ 51.95 Postconstruction environmental impact statements.

(a) *General.* Any supplement to a final environmental impact statement or any environmental assessment prepared under the provisions of this section may incorporate by reference any information contained in a final environmental document previously prepared by the NRC staff that relates to the same production or utilization facility. Documents that may be referenced include, but are not limited to, the final environmental impact statement; supplements to the final environmental impact statement, including supplements prepared at the operating license stage; NRC staff-prepared final generic environmental impact statements; environmental assessments and records of decisions prepared in connection with the construction permit, the operating license, and any license amendment for that facility. A supplement to a final environmental impact statement will include a request for comments as provided in § 51.73.

(b) *Initial operating license stage.* In connection with the issuance of an operating license for a production or utilization facility, the NRC staff will prepare a supplement to the final environmental impact statement on the construction permit for that facility, which will update the prior environmental review. The supplement will only cover matters that differ from the final environmental impact statement or that reflect significant new information concerning matters discussed in

the final environmental impact statement. Unless otherwise determined by the Commission, a supplement on the operation of a nuclear power plant will not include a discussion of need for power, or of alternative energy sources, or of alternative sites, or of any aspect of the storage of spent fuel for the nuclear power plant within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b), and will only be prepared in connection with the first licensing action authorizing full-power operation.

(c) *Operating license renewal stage.* In connection with the renewal of an operating license for a nuclear power plant under part 54 of this chapter, the Commission shall prepare an EIS, which is a supplement to the Commission's NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996) which is available in the NRC Public Document Room, 2120 L Street, NW., (Lower Level) Washington, DC.

(1) The supplemental environmental impact statement for the operating license renewal stage shall address those issues as required by § 51.71. In addition, the NRC staff must comply with 40 CFR 1506.6(b)(3) in conducting the additional scoping process as required by § 51.71(a).

(2) The supplemental environmental impact statement for license renewal is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action except insofar as such benefits and costs are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. In addition, the supplemental environmental impact statement prepared at the license renewal stage need not discuss other issues not related to the environmental effects of the proposed action and the alternatives, or any aspect of the storage of spent fuel for the facility within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b). The analysis of alternatives in the supplemental environmental impact statement should be limited to

the environmental impacts of such alternatives and should otherwise be prepared in accordance with §51.71 and appendix A to subpart A of this part.

(3) The supplemental environmental impact statement shall be issued as a final impact statement in accordance with §§51.91 and 51.93 after considering any significant new information relevant to the proposed action contained in the supplement or incorporated by reference.

(4) The supplemental environmental impact statement must contain the NRC staff's recommendation regarding the environmental acceptability of the license renewal action. In order to make its recommendation and final conclusion on the proposed action, the NRC staff, adjudicatory officers, and Commission shall integrate the conclusions, as amplified by the supporting information in the generic environmental impact statement for issues designated Category 1 (with the exception of offsite radiological impacts for collective effects and the disposal of spent fuel and high level waste) or resolved Category 2, information developed for those open Category 2 issues applicable to the plant in accordance with §51.53(c)(3)(ii), and any significant new information. Given this information, the NRC staff, adjudicatory officers, and Commission shall determine whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

(d) *Postoperating license stage.* In connection with the amendment of an operating license authorizing decommissioning activities at a production or utilization facility covered by §51.20, either for unrestricted use or based on continuing use restrictions applicable to the site, or with the issuance, amendment or renewal of a license to store spent fuel at a nuclear power reactor after expiration of the operating license for the nuclear power reactor, the NRC staff will prepare a supplemental environmental impact statement for the post operating license stage or an environmental assessment, as appropriate, which will update the prior environmental review. The supplement or assessment may incor-

porate by reference any information contained in the final environmental impact statement—operating license stage, or in the records of decision prepared in connection with the construction permit or the operating license for that facility. The supplement will include a request for comments as provided in §51.73. Unless otherwise required by the Commission in accordance with the generic determination in §51.23(a) and the provisions of §51.23(b), a supplemental environmental impact statement for the post operating license stage or an environmental assessment, as appropriate, will address the environmental impacts of spent fuel storage only for the term of the license, license amendment or license renewal applied for.

[61 FR 66545, Dec. 18, 1996]

FINAL ENVIRONMENTAL IMPACT
STATEMENTS—MATERIALS LICENSES

§51.97 Final environmental impact statement—materials license.

(a) *Independent spent fuel storage installation (ISFSI).* Unless otherwise determined by the Commission, and in accordance with the generic determination in §51.23(a) and the provisions of §51.23(b), a final environmental impact statement on the issuance of an initial license for the storage of spent fuel at an independent spent fuel storage installation (ISFSI) or any amendment thereto, will address environmental impacts of spent fuel storage only for the term of the license or amendment applied for.

(b) *Monitored retrievable storage facility (MRS).* As provided in sections 141 (c), (d), and (e) and 148 (a) and (c) of the Nuclear Waste Policy Act of 1982, as amended (NWPA) (96 Stat. 2242, 2243, 42 U.S.C. 10161 (c), (d), (e); 101 Stat. 1330–235, 1330–236, 42 U.S.C. 10168 (a), (c)) a final environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPA (96 Stat. 2242, 42 U.S.C. 10161(b)(1)) but may consider alternative facility designs which are consistent with these design criteria.

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(c) *Uranium enrichment facility.* As provided in section 5(e) of the Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990 (104 Stat. 2834 at 2835, 42 U.S.C. 2243), a final environmental impact statement must be prepared before the hearing on the issuance of a license for a uranium enrichment facility is completed.

[49 FR 34695, Aug. 31, 1984, as amended at 53 FR 31682, Aug. 19, 1988; 57 FR 18392, Apr. 30, 1992]

FINAL ENVIRONMENTAL IMPACT
STATEMENTS—RULEMAKING

§51.99 [Reserved]

NEPA PROCEDURE AND ADMINISTRATIVE
ACTION

GENERAL

§51.100 Timing of Commission action.

(a)(1) Except as provided in §51.13 and paragraph (b) of this section, no decision on a proposed action, including the issuance of a permit, license, or other form of permission, or amendment to or renewal of a permit, license, or other form of permission, or the issuance of an effective regulation, for which an environmental impact statement is required, will be made and no record of decision will be issued until the later of the following dates:

(i) Ninety (90) days after publication by the Environmental Protection Agency of a FEDERAL REGISTER notice stating that the draft environmental impact statement has been filed with EPA.

(ii) Thirty (30) days after publication by the Environmental Protection Agency of a FEDERAL REGISTER notice stating that the final environmental impact statement has been filed with EPA.

(2) If a notice of filing of a final environmental impact statement is published by the Environmental Protection Agency within ninety (90) days after a notice of filing of a draft environmental impact statement has been published by EPA, the minimum thirty (30) day period and the minimum ninety (90) day period may run concurrently to the extent they overlap.

(b) In any rulemaking proceeding for the purpose of protecting the public

health or safety or the common defense and security, the Commission may make and publish the decision on the final rule at the same time that the Environmental Protection Agency publishes the FEDERAL REGISTER notice of filing of the final environmental impact statement.

§51.101 Limitations on actions.

(a) Until a record of decision is issued in connection with a proposed licensing or regulatory action for which an environmental impact statement is required under §51.20, or until a final finding of no significant impact is issued in connection with a proposed licensing or regulatory action for which an environmental assessment is required under §51.21:

(1) No action concerning the proposal may be taken by the Commission which would (i) have an adverse environmental impact, or (ii) limit the choice of reasonable alternatives.

(2) Any action concerning the proposal taken by an applicant which would (i) have an adverse environmental impact, or (ii) limit the choice of reasonable alternatives may be grounds for denial of the license. In the case of an application covered by §§30.32(f), 40.31(f), 50.10(c), 70.21(f), or §§72.16 and 72.34 of this chapter, the provisions of this paragraph will be applied in accordance with §§30.33(a)(5), 40.32(e), 50.10 (c) and (e), 70.23(a)(7) or §72.40(b) of this chapter, as appropriate.

(b) While work on a required program environmental impact statement is in progress, the Commission will not undertake in the interim any major Federal action covered by the program which may significantly affect the quality of the human environment unless such action:

(1) Is justified independently of the program;

(2) Is itself accompanied by an adequate environmental impact statement; and

(3) Will not prejudice the ultimate decision on the program. Absent any satisfactory explanation to the contrary, interim action which tends to determine subsequent development or limit reasonable alternatives, will be considered prejudicial.

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(c) This section does not preclude any applicant for an NRC permit, license, or other form of permission, or amendment to or renewal of an NRC permit, license, or other form of permission, (1) from developing any plans or designs necessary to support an application; or (2) after prior notice and consultation with NRC staff, (i) from performing any physical work necessary to support an application, or (ii) from performing any other physical work relating to the proposed action if the adverse environmental impact of that work is de minimis.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 31682, Aug. 19, 1988]

§ 51.102 Requirement to provide a record of decision; preparation.

(a) A Commission decision on any action for which a final environmental impact statement has been prepared shall be accompanied by or include a concise public record of decision.

(b) Except as provided in paragraph (c) of this section, the record of decision will be prepared by the NRC staff director authorized to take the action.

(c) When a hearing is held on the proposed action under the regulations in subpart G of part 2 of this chapter or when the action can only be taken by the Commissioners acting as a collegial body, the initial decision of the presiding officer or the final decision of the Atomic Safety and Licensing Appeal Board or the final decision of the Commissioners acting as a collegial body will constitute the record of decision. An initial or final decision constituting the record of decision will be distributed as provided in § 51.93.

§ 51.103 Record of decision—general.

(a) The record of decision required by § 51.102 shall be clearly identified and shall:

(1) State the decision.

(2) Identify all alternatives considered by the Commission in reaching the decision, state that these alternatives were included in the range of alternatives discussed in the environmental impact statement, and specify the alternative or alternatives which were considered to be environmentally preferable.

(3) Discuss preferences among alternatives based on relevant factors, including economic and technical considerations where appropriate, the NRC's statutory mission, and any essential considerations of national policy, which were balanced by the Commission in making the decision and state how these considerations entered into the decision.

(4) State whether the Commission has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected, and if not, to explain why those measures were not adopted. Summarize any license conditions and monitoring programs adopted in connection with mitigation measures.

(5) In making a final decision on a license renewal action pursuant to part 54 of this chapter, the Commission shall determine whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

(b) The record of decision may be integrated into any other record prepared by the Commission in connection with the action.

(c) The record of decision may incorporate by reference material contained in a final environmental impact statement.

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28490, June 5, 1996; 61 FR 66546, Dec. 18, 1996; 61 FR 68543, Dec. 30, 1996]

§ 51.104 NRC proceeding using public hearings; consideration of environmental impact statement.

(a)(1) In any proceeding in which (i) a hearing is held on the proposed action, (ii) a final environmental impact statement has been prepared in connection with the proposed action, and (iii) matters within the scope of NEPA and this subpart are in issue, the NRC staff may not offer the final environmental impact statement in evidence or present the position of the NRC staff on matters within the scope of NEPA and this subpart until the final environmental

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impact statement is filed with the Environmental Protection Agency, furnished to commenting agencies and made available to the public.

(2) Any party to the proceeding may take a position and offer evidence on the aspects of the proposed action within the scope of NEPA and this subpart in accordance with the provisions of part 2 of this chapter applicable to that proceeding or in accordance with the terms of the notice of hearing.

(3) In the proceeding the presiding officer will decide those matters in controversy among the parties within the scope of NEPA and this subpart.

(b) In any proceeding in which a hearing is held where the NRC staff has determined that no environmental impact statement need be prepared for the proposed action, unless the Commission orders otherwise, any party to the proceeding may take a position and offer evidence on the aspects of the proposed action within the scope of NEPA and this subpart in accordance with the provisions of part 2 of this chapter applicable to that proceeding or in accordance with the terms of the notice of hearing. In the proceeding, the presiding officer will decide any such matters in controversy among the parties.

PRODUCTION AND UTILIZATION FACILITIES

§51.105 Public hearings in proceedings for issuance of construction permits or licenses to manufacture.

(a) In addition to complying with applicable requirements of §51.104, in a proceeding for the issuance of a construction permit for a nuclear power reactor, testing facility, fuel reprocessing plant or isotopic enrichment plant, or for the issuance of a license to manufacture, the presiding officer will:

(1) Determine whether the requirements of section 102(2) (A), (C), and (E) of NEPA and the regulations in this subpart have been met;

(2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken;

(3) Determine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, whether the construction permit or license to manufacture should be issued, denied, or appropriately conditioned to protect environmental values;

(4) Determine, in an uncontested proceeding, whether the NEPA review conducted by the NRC staff has been adequate; and

(5) Determine, in a contested proceeding, whether in accordance with the regulations in this subpart, the construction permit or license to manufacture should be issued as proposed.

§51.106 Public hearings in proceedings for issuance of operating licenses.

(a) Consistent with the requirements of this section and as appropriate, the presiding officer in an operating license hearing shall comply with any applicable requirements of §§51.104 and 51.105.

(b) During the course of a hearing on an application for issuance of an operating license for a nuclear power reactor, or a testing facility, the presiding officer may authorize, pursuant to §50.57(c) of this chapter, the loading of nuclear fuel in the reactor core and limited operation within the scope of §50.57(c) of this chapter, upon compliance with the procedures described therein. In any such hearing, where any party opposes such authorization on the basis of matters covered by subpart A of this part, the provisions of §§51.104 and 51.105 will apply, as appropriate.

(c) The presiding officer in an operating license hearing shall not admit contentions proffered by any party concerning need for power or alternative energy sources or alternative sites for the facility for which an operating license is requested.

(d) The presiding officer in an operating license hearing shall not raise issues concerning alternative sites for the facility for which an operating license is requested *sua sponte*.

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MATERIALS LICENSES

§ 51.108 [Reserved]

§ 51.109 Public hearings in proceedings for issuance of materials license with respect to a geologic repository.

(a)(1) In a proceeding for the issuance of a license to receive and possess source, special nuclear, and byproduct material at a geologic repository operations area, the NRC staff shall, upon the publication of the notice of hearing in the FEDERAL REGISTER, present its position on whether it is practicable to adopt, without further supplementation, the environmental impact statement (including any supplement thereto) prepared by the Secretary of Energy. If the position of the staff is that supplementation of the environmental impact statement by NRC is required, it shall file its final supplemental environmental impact statement with the Environmental Protection Agency, furnish that statement to commenting agencies, and make it available to the public, before presenting its position, or as soon thereafter as may be practicable. In discharging its responsibilities under this paragraph, the staff shall be guided by the principles set forth in paragraphs (c) and (d) of this section.

(2) Any other party to the proceeding who contends that it is not practicable to adopt the DOE environmental impact statement, as it may have been supplemented, shall file a contention to that effect within thirty days after the publication of the notice of hearing in the FEDERAL REGISTER. Such contention must be accompanied by one or more affidavits which set forth factual and/or technical bases for the claim that, under the principles set forth in paragraphs (c) and (d) of this section, it is not practicable to adopt the DOE environmental impact statement, as it may have been supplemented. The presiding officer shall resolve disputes concerning adoption of the DOE environmental impact statement by using, to the extent possible, the criteria and procedures that are followed in ruling on motions to reopen under § 2.734 of this chapter.

(b) In any such proceeding, the presiding officer will determine those

matters in controversy among the parties within the scope of NEPA and this subpart, specifically including whether, and to what extent, it is practicable to adopt the environmental impact statement prepared by the Secretary of Energy in connection with the issuance of a construction authorization and license for such repository.

(c) The presiding officer will find that it is practicable to adopt any environmental impact statement prepared by the Secretary of Energy in connection with a geologic repository proposed to be constructed under Title I of the Nuclear Waste Policy Act of 1982, as amended, unless:

(1)(i) The action proposed to be taken by the Commission differs from the action proposed in the license application submitted by the Secretary of Energy; and

(ii) The difference may significantly affect the quality of the human environment; or

(2) Significant and substantial new information or new considerations render such environmental impact statement inadequate.

(d) To the extent that the presiding officer determines it to be practicable, in accordance with paragraph (c) of this section, to adopt the environmental impact statement prepared by the Secretary of Energy, such adoption shall be deemed to satisfy all responsibilities of the Commission under NEPA and no further consideration under NEPA or this subpart shall be required.

(e) To the extent that it is not practicable, in accordance with paragraph (c) of this section, to adopt the environmental impact statement prepared by the Secretary of Energy, the presiding officer will:

(1) Determine whether the requirements of section 102(2) (A), (C), and (E) of NEPA and the regulations in this subpart have been met;

(2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken;

(3) Determine, after weighing the environmental, economic, technical and other benefits against environmental

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and other costs, whether the construction authorization or license should be issued, denied, or appropriately conditioned to protect environmental values;

(4) Determine, in an uncontested proceeding, whether the NEPA review conducted by the NRC staff has been adequate; and

(5) Determine, in a contested proceeding, whether in accordance with the regulations in this subpart, the construction authorization or license should be issued as proposed.

(f) In making the determinations described in paragraph (e), the environmental impact statement will be deemed modified to the extent that findings and conclusions differ from those in the final statement prepared by the Secretary of Energy, as it may have been supplemented. The initial decision will be distributed to any persons not otherwise entitled to receive it who responded to the request in the notice of docketing, as described in §51.26(c). If the Commission or the Atomic Safety and Licensing Appeal Board reaches conclusions different from those of the presiding officer with respect to such matters, the final environmental impact statement will be deemed modified to that extent and the decision will be similarly distributed.

(g) The provisions of this section shall be followed, in place of those set out in §51.104, in any proceedings for the issuance of a license to receive and possess source, special nuclear, and by-product material at a geologic repository operations area.

[54 FR 27870, July 3, 1989]

RULEMAKING

§51.110 [Reserved]

PUBLIC NOTICE OF AND ACCESS TO ENVIRONMENTAL DOCUMENTS

§51.116 Notice of intent.

(a) In accordance with §51.26, the appropriate NRC staff director will publish in the FEDERAL REGISTER a notice of intent stating that an environmental impact statement will be prepared. The notice will contain the information specified in §51.27.

(b) Copies of the notice will be sent to appropriate Federal, State, and local agencies, and Indian tribes, appropriate State, regional, and metropolitan clearinghouses and to interested persons upon request. A public announcement of the notice of intent will also be made.

§51.117 Draft environmental impact statement—notice of availability.

(a) Upon completion of a draft environmental impact statement or any supplement to a draft environmental impact statement, the appropriate NRC staff director will publish a notice of availability of the statement in the FEDERAL REGISTER.

(b) The notice will request comments on the proposed action and on the draft statement or any supplement to the draft statement and will specify where comments should be submitted and when the comment period expires.

(c) The notice will (1) state that copies of the draft statement or any supplement to the draft statement are available for public inspection; (2) state where inspection may be made, and (3) state that any comments of Federal, State, and local agencies, Indian tribes or other interested persons will be made available for public inspection when received.

(d) Copies of the notice will be sent to appropriate Federal, State, and local agencies, and Indian tribes, appropriate State, regional, and metropolitan clearinghouses, and to interested persons upon request.

§51.118 Final environmental impact statement—notice of availability.

(a) Upon completion of a final environmental impact statement or any supplement to a final environmental impact statement, the appropriate NRC staff director will publish a notice of availability of the statement in the FEDERAL REGISTER. The notice will state that copies of the final statement or any supplement to the final statement are available for public inspection and where inspection may be made. Copies of the notice will be sent to appropriate Federal, State, and local agencies, and Indian tribes, appropriate State, regional, and metropolitan

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clearinghouses and to interested persons upon request.

(b) Upon adoption of a final environmental impact statement or any supplement to a final environmental impact statement prepared by the Department of Energy with respect to a geologic repository that is subject to the Nuclear Waste Policy Act of 1982, the appropriate NRC staff director shall follow the procedures set out in paragraph (a) of this section.

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 27871, July 3, 1989]

§ 51.119 Publication of finding of no significant impact; distribution.

(a) As required by § 51.35, the appropriate NRC staff director will publish the finding of no significant impact in the FEDERAL REGISTER. The finding of no significant impact will be identified as a draft or final finding, and will contain the information specified in §§ 51.32 or 51.33, as appropriate. A draft finding of no significant impact will include a request for comments which specifies where comments should be submitted and when the comment period expires.

(b) The finding will state that copies of the finding, the environmental assessment setting forth the basis for the finding and any related environmental documents are available for public inspection and where inspection may be made.

(c) A copy of a final finding will be sent to appropriate Federal, State, and local agencies, and Indian tribes, appropriate State, regional, and metropolitan clearinghouses, the applicant or petitioner for rulemaking and any other party to the proceeding, and if a draft finding was issued, to each commenter. Additional copies will be made available in accordance with § 51.123.

§ 51.120 Availability of environmental documents for public inspection.

Copies of environmental reports, draft and final environmental impact statements, environmental assessments, and findings of no significant impact, together with any related comments and environmental documents, will be made available at the NRC Web

site, <http://www.nrc.gov>, and/or at the NRC Public Document Room.

[64 FR 48952, Sept. 9, 1999]

§ 51.121 Status of NEPA actions.

Individuals or organizations desiring information on the NRC's NEPA process or on the status of specific NEPA actions should address inquiries to:

(a) *Utilization facilities*: Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-1270.

(b) *Production facilities*: Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-7800.

(c) *Materials licenses*: Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-7800.

(d) *Rulemaking*: Director, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-6641.

(e) *General Environmental Matters*: Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-1700.

[53 FR 13399, Apr. 25, 1988, as amended at 60 FR 24552, May 9, 1995]

§ 51.122 List of interested organizations and groups.

The NRC Office of Information Resources Management will maintain a master list of organizations and groups, including relevant conservation commissions, known to be interested in the Commission's licensing and regulatory activities. The NRC Office of Information Resources Management with the assistance of the appropriate NRC staff director will select from this master list those organizations and groups that may have an interest in a specific NRC NEPA action and will promptly notify such organizations and groups of the availability

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of a draft environmental impact statement or a draft finding of no significant impact.

[49 FR 9381, Mar. 12, 1984, as amended at 52 FR 31612, Aug. 12, 1987; 54 FR 53316, Dec. 28, 1989]

§ 51.123 Charges for environmental documents; distribution to public; distribution to governmental agencies.

(a) *Distribution to public.* Upon written request to the Reproduction and Distribution Services Section, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the extent available, single copies of draft environmental impact statements and draft findings of no significant impact will be made available to interested persons without charge. Single copies of final environmental impact statements and final findings of no significant impact will also be provided without charge to the persons listed in §§ 51.93(a) and 51.119(c), respectively. When more than one copy of an environmental impact statement or a finding of no significant impact is requested or when available NRC copies have been exhausted, the requestor will be advised that the NRC will provide copies at the charges specified in § 9.35 of this chapter.

(b) *Distribution to governmental agencies.* Upon written request to the Reproduction and Distribution Services Section, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the extent available, copies of draft and final environmental impact statements and draft final findings of no significant impact will be made available in the number requested to Federal, State and local agencies, Indian tribes, and State, regional and metropolitan clearinghouses. When available NRC copies have been exhausted, the requester will be advised that the NRC will provide copies at the charges specified in § 9.35 of this chapter.

(c) *Charges.* Charges for the reproduction of environmental documents by the NRC at locations other than the NRC Public Document Room located in

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Washington, DC vary according to location.

[50 FR 21037, May 22, 1985, as amended at 52 FR 31612, Aug. 21, 1987; 53 FR 43421, Oct. 27, 1988; 61 FR 9902, Mar. 12, 1996; 64 FR 48952, Sept. 9, 1999]

COMMENTING

§ 51.124 Commission duty to comment.

It is the policy of the Commission to comment on draft environmental impact statements prepared by other Federal agencies, consistent with the provisions of 40 CFR 1503.2 and 1503.3.

RESPONSIBLE OFFICIAL

§ 51.125 Responsible official.

The Executive Director for Operations shall be responsible for overall review of NRC NEPA compliance, except for matters under the jurisdiction of a presiding officer, administrative judge, administrative law judge, Atomic Safety and Licensing Board, Atomic Safety and Licensing Appeal Board, or the Commission acting as a collegial body.

APPENDIX A TO SUBPART A OF PART 51— FORMAT FOR PRESENTATION OF MATERIAL IN ENVIRONMENTAL IMPACT STATEMENTS

1. General
2. Cover sheet
3. Summary
4. Purpose of and need for action
5. Alternatives including the proposed action
6. Affected environment
7. Environmental consequences and mitigating actions
8. List of preparers
9. Appendices

1. General.

(a) The Commission will use a format for environmental impact statements which will encourage good analysis and clear presentation of the alternatives including the proposed action. The following standard format for environmental impact statements should be followed unless there is a compelling reason to do otherwise:

- (1) Cover sheet*
- (2) Summary*
- (3) Table of Contents
- (4) Purpose of and Need for Action*
- (5) Alternatives including the proposed action*
- (6) Affected Environment*

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(7) Environmental Consequences and Mitigating Actions*

(8) List of Preparers*

(9) List of Agencies, Organizations and Persons to Whom Copies of the Statement are Sent

(10) Substantive Comments Received and NRC Staff Responses

(11) Index

(12) Appendices (if any)*

If a different format is used, it shall include paragraphs (1), (2), (3), (8), (9), (10), and (11) of this section and shall include the substance of paragraphs (4), (5), (6), (7), and (12) of this section, in any appropriate format.

Additional guidance on the presentation of material under the format headings identified by an asterisk is set out in sections 2.-9. of this appendix.

(b) The techniques of tiering and incorporation by reference described respectively in 40 CFR 1502.20 and 1508.28 and 40 CFR 1502.21¹ of CEQ's NEPA regulations may be used as appropriate to aid in the presentation of issues, eliminate repetition or reduce the size of an environmental impact statement. In appropriate circumstances, draft or final environmental impact statements prepared by other Federal agencies may be adopted in whole or in part in accordance with the procedures outlined in 40 CFR 1506.3² of CEQ's NEPA regulations. In final environmental impact statements, material under the following format headings will normally be presented in less than 150 pages: Purpose of and Need for Action, Alternatives Including the Proposed Action, Affected Environment, and Environmental Consequences and Mitigating Actions. For proposals of unusual scope or complexity, the material presented under these format headings may extend to 300 pages.

2. Cover sheet.

The cover sheet will not exceed one page. It will include:

(a) The name of the NRC office responsible for preparing the statement and a list of any cooperating agencies.

(b) The title of the proposed action that is the subject of the statement with a list of the states, counties or municipalities where the facility or other subject of the action is located, as appropriate.

(c) The name, address, and telephone number of the individual in NRC who can supply further information.

(d) A designation of the statement as a draft or final statement, or a draft or final supplement.

(e) A one paragraph abstract of the statement.

¹ Tiering—40 CFR 1502.20, 40 CFR 1508.28; Incorporation by reference—40 CFR 1502.21.

² Adoption—40 CFR 1506.3.

(f) For draft environmental impact statements, the date by which comments must be received. This date may be specified in the form of the following or a substantially similar statement:

“Comments should be filed no later than ³ days after the date on which the Environmental Protection Agency notice stating that the draft environmental impact statement has been filed with EPA is published in the FEDERAL REGISTER. Comments received after the expiration of the comment period will be considered if it is practical to do so but assurance of consideration of late comments cannot be given.”

3. Summary.

Each environmental impact statement will contain a summary which adequately and accurately summarizes the statement. The summary will stress the major issues considered. The summary will discuss the areas of controversy, will identify any remaining issues to be resolved, and will present the major conclusions and recommendations. The summary will normally not exceed 15 pages.

4. Purpose of and need for action.

The statement will briefly describe and specify the need for the proposed action. The alternative of no action will be discussed. In the case of nuclear power plant construction or siting, consideration will be given to the potential impact of conservation measures in determining the demand for power and consequent need for additional generating capacity.

5. Alternatives including the proposed action.

This section is the heart of the environmental impact statement. It will present the environmental impacts of the proposal and the alternatives in comparative form. Where important to the comparative evaluation of alternatives, appropriate mitigating measures of the alternatives will be discussed. All reasonable alternatives will be identified. The range of alternatives discussed will encompass those proposed to be considered by the ultimate decisionmaker. An otherwise reasonable alternative will not be excluded from discussion solely on the ground that it is not within the jurisdiction of the NRC.⁴ The discussion of alternatives will take into

³The number of days in the comment period should be inserted. The minimum comment period is 45 days (see § 51.73.)

⁴With respect to limitations on NRC's NEPA authority and responsibility imposed by the Federal Water Pollution Control Act Amendments of 1972, see §§ 51.10(c), 51.22(c)(17) and 51.71(d).

accounts, without duplicating, the environmental information and analyses included in sections, 4., 6. and 7. of this appendix.

In the draft environmental impact statement, this section will either include a preliminary recommendation on the action to be taken, or identify the alternatives under consideration.

In the final environmental impact statement, this section will include a final recommendation on the action to be taken.

6. *Affected environment.*

The environmental impact statement will succinctly describe the environment to be affected by the proposed action. Data and analyses in the statement will be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced. Effort and attention will be concentrated on important issues; useless bulk will be eliminated.

7. *Environmental consequences and mitigating actions.*

This section discusses the environmental consequences of alternatives, including the proposed actions and any mitigating actions which may be taken. Alternatives eliminated from detailed study will be identified and a discussion of those alternatives will be confined to a brief statement of the reasons why the alternatives were eliminated. The level of information for each alternative considered in detail will reflect the depth of analysis required for sound decisionmaking.

The discussion will include any adverse environmental effects which cannot be avoided should the alternative be implemented, the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources which would be involved in the alternative should it be implemented. This section will include discussions of:

- (a) Direct effects and their significance.
- (b) Indirect effects and their significance.
- (c) Possible conflicts between the alternative and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.
- (d) Means to mitigate adverse environmental impacts.

8. *List of preparers.*

The environmental impact statement will list the names and qualifications (expertise, experience, professional disciplines), of the persons who were primarily responsible for preparing the environmental impact statement or significant background papers. Persons responsible for making an independent evaluation of information submitted by the applicant or petitioner for rulemaking or

others will be included in the list. Where possible, the persons who are responsible for a particular analysis, including analyses in background papers, will be identified.

9. *Appendices.*

An appendix to an environmental impact statement will:

- (a) Consist of material prepared in connection with an environmental impact statement (as distinct from material which is not so prepared and which is incorporated by reference (40 CFR 1502.21)).
- (b) Normally consist of material which substantiates any analysis fundamental to the impact statement. Discussion of methodology used may be placed in an appendix.
- (c) Normally be analytic.
- (d) Be relevant to the decision to be made.
- (e) Be circulated with the environmental impact statement or be readily available on request.

Discussion of Footnotes

1. *Tiering.*

40 CFR 1502.20 states:

"Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (§1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. The subsequent document shall state where the earlier document is available. Tiering may also be appropriate for different stages of actions. (Sec. 1508.28)."

40 CFR 1508.28 states:

"'Tiering' refers to the coverage of general matters in broader environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared. Tiering is appropriate when the sequence of statements or analyses is:

"(a) From a program, plan, or policy environmental impact statement to a program, plan, or policy statement or analysis of lesser scope or to a site-specific statement or analysis.

“(b) From an environmental impact statement on a specific action at an early stage (such as need and site selection) to a supplement (which is preferred) or a subsequent statement or analysis at a later stage (such as environmental mitigation). Tiering in such cases is appropriate when it helps the lead agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe.”
Incorporation by reference. 40 CFR 1502.21 states:

“Agencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment. Material based on proprietary data which is itself not available for review and comment shall not be incorporated by reference.”

2. *Adoption.*

40 CFR 1506.3 states:

“(a) An agency may adopt a Federal draft or final environmental impact statement or portion thereof provided that the statement or portion thereof meets the standards for an adequate statement under these regulations.

“(b) If the actions covered by the original environmental impact statement and the proposed action are substantially the same, the agency adopting another agency’s statement is not required to recirculate it except as a final statement. Otherwise the adopting agency shall treat the statement as a draft and recirculate it (except as provided in paragraph (c) of this section).

“(c) A cooperating agency may adopt without recirculating the environmental impact statement of a lead agency when, after an

independent review of the statement, the cooperating agency concludes that its comments and suggestions have been satisfied.

“(d) When an agency adopts a statement which is not final within the agency that prepared it, or when the action it assesses is the subject of a referral under part 1504, or when the statement’s adequacy is the subject of a judicial action which is not final, the agency shall so specify.”

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28490, June 5, 1996; 61 FR 66546, Dec. 18, 1996]

APPENDIX B TO SUBPART A OF PART 51—
 ENVIRONMENTAL EFFECT OF RENEWING THE OPERATING LICENSE OF A NUCLEAR POWER PLANT

The Commission has assessed the environmental impacts associated with granting a renewed operating license for a nuclear power plant to a licensee who holds either an operating license or construction permit as of June 30, 1995. Table B-1 summarizes the Commission’s findings on the scope and magnitude of environmental impacts of renewing the operating license for a nuclear power plant as required by section 102(2) of the National Environmental Policy Act of 1969, as amended. Table B-1, subject to an evaluation of those issues identified in Category 2 as requiring further analysis and possible significant new information, represents the analysis of the environmental impacts associated with renewal of any operating license and is to be used in accordance with §51.95(c). On a 10-year cycle, the Commission intends to review the material in this appendix and update it if necessary. A scoping notice must be published in the FEDERAL REGISTER indicating the results of the NRC’s review and inviting public comments and proposals for other areas that should be updated.

TABLE B-1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS ¹

Issue	Category ²	Findings ³
Surface Water Quality, Hydrology, and Use (for all plants)		
Impacts of refurbishment on surface water quality.	1	SMALL. Impacts are expected to be negligible during refurbishment because best management practices are expected to be employed to control soil erosion and spills.
Impacts of refurbishment on surface water use.	1	SMALL. Water use during refurbishment will not increase appreciably or will be reduced during plant outage.
Altered current patterns at intake and discharge structures.	1	SMALL. Altered current patterns have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Altered salinity gradients	1	SMALL. Salinity gradients have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Altered thermal stratification of lakes	1	SMALL. Generally, lake stratification has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term.

TABLE B–1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS¹—Continued

Issue	Category ²	Findings ³
Temperature effects on sediment transport capacity.	1	SMALL. These effects have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Scouring caused by discharged cooling water.	1	SMALL. Scouring has not been found to be a problem at most operating nuclear power plants and has caused only localized effects at a few plants. It is not expected to be a problem during the license renewal term.
Eutrophication	1	SMALL. Eutrophication has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term.
Discharge of chlorine or other biocides.	1	SMALL. Effects are not a concern among regulatory and resource agencies, and are not expected to be a problem during the license renewal term.
Discharge of sanitary wastes and minor chemical spills.	1	SMALL. Effects are readily controlled through NPDES permit and periodic modifications, if needed, and are not expected to be a problem during the license renewal term.
Discharge of other metals in waste water.	1	SMALL. These discharges have not been found to be a problem at operating nuclear power plants with cooling-tower-based heat dissipation systems and have been satisfactorily mitigated at other plants. They are not expected to be a problem during the license renewal term.
Water use conflicts (plants with once-through cooling systems).	1	SMALL. These conflicts have not been found to be a problem at operating nuclear power plants with once-through heat dissipation systems.
Water use conflicts (plants with cooling ponds or cooling towers using make-up water from a small river with low flow).	2	SMALL OR MODERATE. The issue has been a concern at nuclear power plants with cooling ponds and at plants with cooling towers. Impacts on instream and riparian communities near these plants could be of moderate significance in some situations. See § 51.53(c)(3)(ii)(A).

Aquatic Ecology (for all plants)

Refurbishment	1	SMALL. During plant shutdown and refurbishment there will be negligible effects on aquatic biota because of a reduction of entrainment and impingement of organisms or a reduced release of chemicals.
Accumulation of contaminants in sediments or biota.	1	SMALL. Accumulation of contaminants has been a concern at a few nuclear power plants but has been satisfactorily mitigated by replacing copper alloy condenser tubes with those of another metal. It is not expected to be a problem during the license renewal term.
Entrainment of phytoplankton and zooplankton.	1	SMALL. Entrainment of phytoplankton and zooplankton has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term.
Cold shock	1	SMALL. Cold shock has been satisfactorily mitigated at operating nuclear plants with once-through cooling systems, has not endangered fish populations or been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds, and is not expected to be a problem during the license renewal term.
Thermal plume barrier to migrating fish.	1	SMALL. Thermal plumes have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Distribution of aquatic organisms	1	SMALL. Thermal discharge may have localized effects but is not expected to effect the larger geographical distribution of aquatic organisms.
Premature emergence of aquatic insects.	1	SMALL. Premature emergence has been found to be a localized effect at some operating nuclear power plants but has not been a problem and is not expected to be a problem during the license renewal term.
Gas supersaturation (gas bubble disease).	1	SMALL. Gas supersaturation was a concern at a small number of operating nuclear power plants with once-through cooling systems but has been satisfactorily mitigated. It has not been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds and is not expected to be a problem during the license renewal term.
Low dissolved oxygen in the discharge.	1	SMALL. Low dissolved oxygen has been a concern at one nuclear power plant with a once-through cooling system but has been effectively mitigated. It has not been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds and is not expected to be a problem during the license renewal term.
Losses from predation, parasitism, and disease among organisms exposed to sublethal stresses.	1	SMALL. These types of losses have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.

TABLE B-1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS ¹—Continued

Issue	Category ²	Findings ³
Stimulation of nuisance organisms (e.g., shipworms).	1	SMALL. Stimulation of nuisance organisms has been satisfactorily mitigated at the single nuclear power plant with a once-through cooling system where previously it was a problem. It has not been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds and is not expected to be a problem during the license renewal term.
Aquatic Ecology (for plants with once-through and cooling pond heat dissipation systems)		
Entrainment of fish and shellfish in early life stages.	2	SMALL, MODERATE, OR LARGE. The impacts of entrainment are small at many plants but may be moderate or even large at a few plants with once-through and cooling-pond cooling systems. Further, ongoing efforts in the vicinity of these plants to restore fish populations may increase the numbers of fish susceptible to intake effects during the license renewal period, such that entrainment studies conducted in support of the original license may no longer be valid. See §51.53(c)(3)(ii)(B).
Impingement of fish and shellfish	2	SMALL, MODERATE, OR LARGE. The impacts of impingement are small at many plants but may be moderate or even large at a few plants with once-through and cooling-pond cooling systems. See §51.53(c)(3)(ii)(B).
Heat shock	2	SMALL, MODERATE, OR LARGE. Because of continuing concerns about heat shock and the possible need to modify thermal discharges in response to changing environmental conditions, the impacts may be of moderate or large significance at some plants. See §51.53(c)(3)(ii)(B).
Aquatic Ecology (for plants with cooling-tower-based heat dissipation systems)		
Entrainment of fish and shellfish in early life stages.	1	SMALL. Entrainment of fish has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term.
Impingement of fish and shellfish	1	SMALL. The impingement has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term.
Heat shock	1	SMALL. Heat shock has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term.
Ground-water Use and Quality		
Impacts of refurbishment on ground-water use and quality.	1	SMALL. Extensive dewatering during the original construction on some sites will not be repeated during refurbishment on any sites. Any plant wastes produced during refurbishment will be handled in the same manner as in current operating practices and are not expected to be a problem during the license renewal term.
Ground-water use conflicts (potable and service water; plants that use <100 gpm).	1	SMALL. Plants using less than 100 gpm are not expected to cause any ground-water use conflicts.
Ground-water use conflicts (potable and service water, and dewatering; plants that use >100 gpm).	2	SMALL, MODERATE, OR LARGE. Plants that use more than 100 gpm may cause ground-water use conflicts with nearby ground-water users. See §51.53(c)(3)(ii)(C).
Ground-water use conflicts (plants using cooling towers withdrawing make-up water from a small river).	2	SMALL, MODERATE, OR LARGE. Water use conflicts may result from surface water withdrawals from small water bodies during low flow conditions which may affect aquifer recharge, especially if other ground-water or upstream surface water users come on line before the time of license renewal. See §51.53(c)(3)(ii)(A).
Ground-water use conflicts (Ranney wells).	2	SMALL, MODERATE, OR LARGE. Ranney wells can result in potential ground-water depression beyond the site boundary. Impacts of large ground-water withdrawal for cooling tower makeup at nuclear power plants using Ranney wells must be evaluated at the time of application for license renewal. See §51.53(c)(3)(ii)(C).
Ground-water quality degradation (Ranney wells).	1	SMALL. Ground-water quality at river sites may be degraded by induced infiltration of poor-quality river water into an aquifer that supplies large quantities of reactor cooling water. However, the lower quality infiltrating water would not preclude the current uses of ground water and is not expected to be a problem during the license renewal term.
Ground-water quality degradation (saltwater intrusion).	1	SMALL. Nuclear power plants do not contribute significantly to saltwater intrusion.

TABLE B–1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS¹—Continued

Issue	Category ²	Findings ³
Ground-water quality degradation (cooling ponds in salt marshes).	1	SMALL. Sites with closed-cycle cooling ponds may degrade ground-water quality. Because water in salt marshes is brackish, this is not a concern for plants located in salt marshes.
Ground-water quality degradation (cooling ponds at inland sites).	2	SMALL, MODERATE, OR LARGE. Sites with closed-cycle cooling ponds may degrade ground-water quality. For plants located inland, the quality of the ground water in the vicinity of the ponds must be shown to be adequate to allow continuation of current uses. See § 51.53(c)(3)(ii)(D).
Terrestrial Resources		
Refurbishment impacts	2	SMALL, MODERATE, OR LARGE. Refurbishment impacts are insignificant if no loss of important plant and animal habitat occurs. However, it cannot be known whether important plant and animal communities may be affected until the specific proposal is presented with the license renewal application. See § 51.53(c)(3)(ii)(E).
Cooling tower impacts on crops and ornamental vegetation.	1	SMALL. Impacts from salt drift, icing, fogging, or increased humidity associated with cooling tower operation have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Cooling tower impacts on native plants.	1	SMALL. Impacts from salt drift, icing, fogging, or increased humidity associated with cooling tower operation have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Bird collisions with cooling towers	1	SMALL. These collisions have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Cooling pond impacts on terrestrial resources.	1	SMALL. Impacts of cooling ponds on terrestrial ecological resources are considered to be of small significance at all sites.
Power line right-of-way management (cutting and herbicide application).	1	SMALL. The impacts of right-of-way maintenance on wildlife are expected to be of small significance at all sites.
Bird collision with power lines	1	SMALL. Impacts are expected to be of small significance at all sites.
Impacts of electromagnetic fields on flora and fauna (plants, agricultural crops, honeybees, wildlife, livestock).	1	SMALL. No significant impacts of electromagnetic fields on terrestrial flora and fauna have been identified. Such effects are not expected to be a problem during the license renewal term.
Floodplains and wetland on power line right of way.	1	SMALL. Periodic vegetation control is necessary in forested wetlands underneath power lines and can be achieved with minimal damage to the wetland. No significant impact is expected at any nuclear power plant during the license renewal term.
Threatened or Endangered Species (for all plants)		
Threatened or endangered species ..	2	SMALL, MODERATE, OR LARGE. Generally, plant refurbishment and continued operation are not expected to adversely affect threatened or endangered species. However, consultation with appropriate agencies would be needed at the time of license renewal to determine whether threatened or endangered species are present and whether they would be adversely affected. See § 51.53(c)(3)(ii)(E).
Air Quality		
Air quality during refurbishment (non-attainment and maintenance areas).	2	SMALL, MODERATE, OR LARGE. Air quality impacts from plant refurbishment associated with license renewal are expected to be small. However, vehicle exhaust emissions could be cause for concern at locations in or near nonattainment or maintenance areas. The significance of the potential impact cannot be determined without considering the compliance status of each site and the numbers of workers expected to be employed during the outage. See § 51.53(c)(3)(ii)(F).
Air quality effects of transmission lines.	1	SMALL. Production of ozone and oxides of nitrogen is insignificant and does not contribute measurably to ambient levels of these gases.
Land Use		
Onsite land use	1	SMALL. Projected onsite land use changes required during refurbishment and the renewal period would be a small fraction of any nuclear power plant site and would involve land that is controlled by the applicant.

TABLE B-1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS¹—Continued

Issue	Category ²	Findings ³
Power line right of way	1	SMALL. Ongoing use of power line right of ways would continue with no change in restrictions. The effects of these restrictions are of small significance.
Human Health		
Radiation exposures to the public during refurbishment.	1	SMALL. During refurbishment, the gaseous effluents would result in doses that are similar to those from current operation. Applicable regulatory dose limits to the public are not expected to be exceeded.
Occupational radiation exposures during refurbishment.	1	SMALL. Occupational doses from refurbishment are expected to be within the range of annual average collective doses experienced for pressurized-water reactors and boiling-water reactors. Occupational mortality risk from all causes including radiation is in the mid-range for industrial settings.
Microbiological organisms (occupational health).	1	SMALL. Occupational health impacts are expected to be controlled by continued application of accepted industrial hygiene practices to minimize worker exposures.
Microbiological organisms (public health)(plants using lakes or canals, or cooling towers or cooling ponds that discharge to a small river).	2	SMALL, MODERATE, OR LARGE. These organisms are not expected to be a problem at most operating plants except possibly at plants using cooling ponds, lakes, or canals that discharge to small rivers. Without site-specific data, it is not possible to predict the effects generically. See §51.53(c)(3)(ii)(G).
Noise	1	SMALL. Noise has not been found to be a problem at operating plants and is not expected to be a problem at any plant during the license renewal term.
Electromagnetic fields, acute effects (electric shock).	2	SMALL, MODERATE, OR LARGE. Electrical shock resulting from direct access to energized conductors or from induced charges in metallic structures have not been found to be a problem at most operating plants and generally are not expected to be a problem during the license renewal term. However, site-specific review is required to determine the significance of the electric shock potential at the site. See §51.53(c)(3)(ii)(H).
Electromagnetic fields, chronic effects ⁵ .	4 NA	UNCERTAIN. Biological and physical studies of 60-Hz electromagnetic fields have not found consistent evidence linking harmful effects with field exposures. However, research is continuing in this area and a consensus scientific view has not been reached. ⁵
Radiation exposures to public (license renewal term).	1	SMALL. Radiation doses to the public will continue at current levels associated with normal operations.
Occupational radiation exposures (license renewal term).	1	SMALL. Projected maximum occupational doses during the license renewal term are within the range of doses experienced during normal operations and normal maintenance outages, and would be well below regulatory limits.
Socioeconomics		
Housing impacts	2	SMALL, MODERATE, OR LARGE. Housing impacts are expected to be of small significance at plants located in a medium or high population area and not in an area where growth control measures that limit housing development are in effect. Moderate or large housing impacts of the workforce associated with refurbishment may be associated with plants located in sparsely populated areas or in areas with growth control measures that limit housing development. See §51.53(c)(3)(ii)(I).
Public services: public safety, social services, and tourism and recreation.	1	SMALL. Impacts to public safety, social services, and tourism and recreation are expected to be of small significance at all sites.
Public services: public utilities	2	SMALL OR MODERATE. An increased problem with water shortages at some sites may lead to impacts of moderate significance on public water supply availability. See §51.53(c)(3)(ii)(I).
Public services, education (refurbishment).	2	SMALL, MODERATE, OR LARGE. Most sites would experience impacts of small significance but larger impacts are possible depending on site- and project-specific factors. See §51.53(c)(3)(ii)(I).
Public services, education (license renewal term).	1	SMALL. Only impacts of small significance are expected.
Offsite land use (refurbishment)	2	SMALL OR MODERATE. Impacts may be of moderate significance at plants in low population areas. See §51.53(c)(3)(ii)(I).
Offsite land use (license renewal term).	2	SMALL, MODERATE, OR LARGE. Significant changes in land use may be associated with population and tax revenue changes resulting from license renewal. See §51.53(c)(3)(ii)(I).

TABLE B–1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS¹—Continued

Issue	Category ²	Findings ³
Public services, Transportation	2	SMALL, MODERATE, OR LARGE. Transportation impacts (level of service) of highway traffic generated during plant refurbishment and during the term of the renewed license are generally expected to be of small significance. However, the increase in traffic associated with additional workers and the local road and traffic control conditions may lead to impacts of moderate or large significance at some sites. See §51.53(c)(3)(ii)(J).
Historic and archaeological resources.	2	SMALL, MODERATE, OR LARGE. Generally, plant refurbishment and continued operation are expected to have no more than small adverse impacts on historic and archaeological resources. However, the National Historic Preservation Act requires the Federal agency to consult with the State Historic Preservation Officer to determine whether there are properties present that require protection. See §51.53(c)(3)(ii)(K).
Aesthetic impacts (refurbishment)	1	SMALL. No significant impacts are expected during refurbishment.
Aesthetic impacts (license renewal term).	1	SMALL. No significant impacts are expected during the license renewal term.
Aesthetic impacts of transmission lines (license renewal term).	1	SMALL. No significant impacts are expected during the license renewal term.
Postulated Accidents		
Design basis accidents	1	SMALL. The NRC staff has concluded that the environmental impacts of design basis accidents are of small significance for all plants.
Severe accidents	2	SMALL. The probability weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to ground water, and societal and economic impacts from severe accidents are small for all plants. However, alternatives to mitigate severe accidents must be considered for all plants that have not considered such alternatives. See §51.53(c)(3)(ii)(L).
Uranium Fuel Cycle and Waste Management		
Offsite radiological impacts (individual effects from other than the disposal of spent fuel and high level waste).	1	SMALL. Off-site impacts of the uranium fuel cycle have been considered by the Commission in Table S–3 of this part. Based on information in the GEIS, impacts on individuals from radioactive gaseous and liquid releases including radon-222 and technetium-99 are small.
Offsite radiological impacts (collective effects).	1	The 100 year environmental dose commitment to the U.S. population from the fuel cycle, high level waste and spent fuel disposal excepted, is calculated to be about 14,800 person rem, or 12 cancer fatalities, for each additional 20-year power reactor operating term. Much of this, especially the contribution of radon releases from mines and tailing piles, consists of tiny doses summed over large populations. This same dose calculation can theoretically be extended to include many tiny doses over additional thousands of years as well as doses outside the U. S. The result of such a calculation would be thousands of cancer fatalities from the fuel cycle, but this result assumes that even tiny doses have some statistical adverse health effect which will not ever be mitigated (for example no cancer cure in the next thousand years), and that these doses projected over thousands of years are meaningful. However, these assumptions are questionable. In particular, science cannot rule out the possibility that there will be no cancer fatalities from these tiny doses. For perspective, the doses are very small fractions of regulatory limits, and even smaller fractions of natural background exposure to the same populations. Nevertheless, despite all the uncertainty, some judgement as to the regulatory NEPA implications of these matters should be made and it makes no sense to repeat the same judgement in every case. Even taking the uncertainties into account, the Commission concludes that these impacts are acceptable in that these impacts would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR Part 54 should be eliminated. Accordingly, while the Commission has not assigned a single level of significance for the collective effects of the fuel cycle, this issue is considered Category 1.

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TABLE B-1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS¹—Continued

Issue	Category ²	Findings ³
Offsite radiological impacts (spent fuel and high level waste disposal).	1	<p>For the high level waste and spent fuel disposal component of the fuel cycle, there are no current regulatory limits for offsite releases of radionuclides for the current candidate repository site. However, if we assume that limits are developed along the lines of the 1995 National Academy of Sciences (NAS) report, "Technical Bases for Yucca Mountain Standards," and that in accordance with the Commission's Waste Confidence Decision, 10 CFR 51.23, a repository can and likely will be developed at some site which will comply with such limits, peak doses to virtually all individuals will be 100 millirem per year or less. However, while the Commission has reasonable confidence that these assumptions will prove correct, there is considerable uncertainty since the limits are yet to be developed, no repository application has been completed or reviewed, and uncertainty is inherent in the models used to evaluate possible pathways to the human environment. The NAS report indicated that 100 millirem per year should be considered as a starting point for limits for individual doses, but notes that some measure of consensus exists among national and international bodies that the limits should be a fraction of the 100 millirem per year. The lifetime individual risk from 100 millirem annual dose limit is about 3×10^{-3}.</p> <p>Estimating cumulative doses to populations over thousands of years is more problematic. The likelihood and consequences of events that could seriously compromise the integrity of a deep geologic repository were evaluated by the Department of Energy in the "Final Environmental Impact Statement: Management of Commercially Generated Radioactive Waste," October 1980. The evaluation estimated the 70-year whole-body dose commitment to the maximum individual and to the regional population resulting from several modes of breaching a reference repository in the year of closure, after 1,000 years, after 100,000 years, and after 100,000,000 years. Subsequently, the NRC and other federal agencies have expended considerable effort to develop models for the design and for the licensing of a high level waste repository, especially for the candidate repository at Yucca Mountain. More meaningful estimates of doses to population may be possible in the future as more is understood about the performance of the proposed Yucca Mountain repository. Such estimates would involve very great uncertainty, especially with respect to cumulative population doses over thousands of years. The standard proposed by the NAS is a limit on maximum individual dose. The relationship of potential new regulatory requirements, based on the NAS report, and cumulative population impacts has not been determined, although the report articulates the view that protection of individuals will adequately protect the population for a repository at Yucca Mountain. However, EPA's generic repository standards in 40 CFR part 191 generally provide an indication of the order of magnitude of cumulative risk to population that could result from the licensing of a Yucca Mountain repository, assuming the ultimate standards will be within the range of standards now under consideration. The standards in 40 CFR part 191 protect the population by imposing "containment requirements" that limit the cumulative amount of radioactive material released over 10,000 years. Reporting performance standards that will be required by EPA are expected to result in releases and associated health consequences in the range between 10 and 100 premature cancer deaths with an upper limit of 1,000 premature cancer deaths worldwide for a 100,000 metric tonne (MTHM) repository.</p> <p>Nevertheless, despite all the uncertainty, some judgement as to the regulatory NEPA implications of these matters should be made and it makes no sense to repeat the same judgement in every case. Even taking the uncertainties into account, the Commission concludes that these impacts are acceptable in that these impacts would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR part 54 should be eliminated. Accordingly, while the Commission has not assigned a single level of significance for the impacts of spent fuel and high level waste disposal, this issue is considered Category 1.</p>
Nonradiological impacts of the uranium fuel cycle.	1	<p>SMALL. The nonradiological impacts of the uranium fuel cycle resulting from the renewal of an operating license for any plant are found to be small.</p>

TABLE B–1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS ¹—Continued

Issue	Category ²	Findings ³
Low-level waste storage and disposal.	1	SMALL. The comprehensive regulatory controls that are in place and the low public doses being achieved at reactors ensure that the radiological impacts to the environment will remain small during the term of a renewed license. The maximum additional on-site land that may be required for low-level waste storage during the term of a renewed license and associated impacts will be small. Nonradiological impacts on air and water will be negligible. The radiological and nonradiological environmental impacts of long-term disposal of low-level waste from any individual plant at licensed sites are small. In addition, the Commission concludes that there is reasonable assurance that sufficient low-level waste disposal capacity will be made available when needed for facilities to be decommissioned consistent with NRC decommissioning requirements.
Mixed waste storage and disposal	1	SMALL. The comprehensive regulatory controls and the facilities and procedures that are in place ensure proper handling and storage, as well as negligible doses and exposure to toxic materials for the public and the environment at all plants. License renewal will not increase the small, continuing risk to human health and the environment posed by mixed waste at all plants. The radiological and nonradiological environmental impacts of long-term disposal of mixed waste from any individual plant at licensed sites are small. In addition, the Commission concludes that there is reasonable assurance that sufficient mixed waste disposal capacity will be made available when needed for facilities to be decommissioned consistent with NRC decommissioning requirements.
On-site spent fuel	1	SMALL. The expected increase in the volume of spent fuel from an additional 20 years of operation can be safely accommodated on site with small environmental effects through dry or pool storage at all plants if a permanent repository or monitored retrievable storage is not available.
Nonradiological waste	1	SMALL. No changes to generating systems are anticipated for license renewal. Facilities and procedures are in place to ensure continued proper handling and disposal at all plants.
Transportation	1	SMALL. The impacts of transporting spent fuel enriched up to 5 percent uranium-235 with average burnup for the peak rod to current levels approved by NRC up to 62,000 MWd/MTU and the cumulative impacts of transporting high-level waste to a single repository, such as Yucca Mountain, Nevada are found to be consistent with the impact values contained in 10 CFR 51.52(c), Summary Table S–4—Environmental Impact of Transportation of Fuel and Waste to and from One Light-Water-Cooled Nuclear Power Reactor. If fuel enrichment or burnup conditions are not met, the applicant must submit an assessment of the implications for the environmental impact values reported in §51.52.
Decommissioning		
Radiation doses	1	SMALL. Doses to the public will be well below applicable regulatory standards regardless of which decommissioning method is used. Occupational doses would increase no more than 1 man-rem caused by buildup of long-lived radionuclides during the license renewal term.
Waste management	1	SMALL. Decommissioning at the end of a 20-year license renewal period would generate no more solid wastes than at the end of the current license term. No increase in the quantities of Class C or greater than Class C wastes would be expected.
Air quality	1	SMALL. Air quality impacts of decommissioning are expected to be negligible either at the end of the current operating term or at the end of the license renewal term.
Water quality	1	SMALL. The potential for significant water quality impacts from erosion or spills is no greater whether decommissioning occurs after a 20-year license renewal period or after the original 40-year operation period, and measures are readily available to avoid such impacts.
Ecological resources	1	SMALL. Decommissioning after either the initial operating period or after a 20-year license renewal period is not expected to have any direct ecological impacts.
Socioeconomic impacts	1	SMALL. Decommissioning would have some short-term socioeconomic impacts. The impacts would not be increased by delaying decommissioning until the end of a 20-year relicensing period, but they might be decreased by population and economic growth.

TABLE B-1—SUMMARY OF FINDINGS ON NEPA ISSUES FOR LICENSE RENEWAL OF NUCLEAR POWER PLANTS¹—Continued

Issue	Category ²	Findings ³
Environmental Justice		
Environmental justice ⁶	⁴ NA	NONE. The need for and the content of an analysis of environmental justice will be addressed in plant-specific reviews. ⁶

¹Data supporting this table are contained in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996) and NUREG-1437, Vol. 1, Addendum 1, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Main Report Section 6.3—'Transportation,' Table 9.1 'Summary of findings on NEPA issues for license renewal of nuclear power plants,' Final Report" (August 1999).

²The numerical entries in this column are based on the following category definitions:
 Category 1: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown:
 (1) The environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristic;
 (2) A single significance level (i.e., small, moderate, or large) has been assigned to the impacts (except for collective off site radiological impacts from the fuel cycle and from high level waste and spent fuel disposal); and
 (3) Mitigation of adverse impacts associated with the issue has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures are likely not to be sufficiently beneficial to warrant implementation.
 The generic analysis of the issue may be adopted in each plant-specific review.

Category 2: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown that one or more of the criteria of Category 1 cannot be met, and therefore additional plant-specific review is required.

³The impact findings in this column are based on the definitions of three significance levels. Unless the significance level is identified as beneficial, the impact is adverse, or in the case of "small," may be negligible. The definitions of significance follow:
 SMALL—For the issue, environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small as the term is used in this table.

MODERATE—For the issue, environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE—For the issue, environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

For issues where probability is a key consideration (i.e., accident consequences), probability was a factor in determining significance.

⁴NA (not applicable). The categorization and impact finding definitions do not apply to these issues.

⁵If, in the future, the Commission finds that, contrary to current indications, a consensus has been reached by appropriate Federal health agencies that there are adverse health effects from electromagnetic fields, the Commission will require applicants to submit plant-specific reviews of these health effects as part of their license renewal applications. Until such time, applicants for license renewal are not required to submit information on this issue.

⁶Environmental Justice was not addressed in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," because guidance for implementing Executive Order 12898 issued on February 11, 1994, was not available prior to completion of NUREG-1437. This issue will be addressed in individual license renewal reviews.

[61 FR 66546, Dec. 18, 1996, as amended at 62 FR 59276, Nov. 3, 1997; 64 FR 48507, Sept. 3, 1999; 66 FR 39278, July 30, 2001]

PART 52—EARLY SITE PERMITS; STANDARD DESIGN CERTIFICATIONS; AND COMBINED LICENSES FOR NUCLEAR POWER PLANTS

GENERAL PROVISIONS

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- 52.15 Filing of applications.
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- 52.35 Use of site for other purposes.
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Subpart B—Standard Design Certifications

- 52.41 Scope of subpart.
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- 52.45 Filing of applications.
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- 52.49 Fees for review of applications.
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