

RULEMAKING ISSUE NOTATION VOTE

May 9, 2001

SECY-01-0083

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: PROPOSED RULE TO STANDARDIZE THE PROCESS FOR ALLOWING A LICENSEE TO RELEASE PART OF ITS REACTOR FACILITY OR SITE FOR UNRESTRICTED USE BEFORE NRC HAS APPROVED ITS LICENSE TERMINATION PLAN

PURPOSE:

To obtain Commission approval to publish a proposed rule that would standardize the process for allowing a power reactor licensee to release part of its reactor facility or site for unrestricted use before NRC has approved its license termination plan (LTP). This type of release is called a "partial site release." The proposed rule would provide greater assurance that residual radioactivity would meet the radiological criteria for license termination, even if a licensee released parts of the site before submitting its LTP.

BACKGROUND:

In the NRC review of the proposed sale of property that is currently part of AmerGen Energy Company's Oyster Creek plant site, the NRC staff concluded that current regulations in 10 CFR Part 50 do not address the release of part of a reactor facility or site before NRC approves the licensee's LTP. Because several reactor licensees have expressed interest in selling parts of their sites before NRC approves their LTPs, the staff believes this issue should be resolved generically. In SECY-00-0023, "Rulemaking Plan to Standardize the Process for Allowing a Licensee to Release Part of Its Reactor Facility or Site for Unrestricted Use Before Receiving Approval of Its License Termination Plan," dated February 2, 2000, the staff proposed a rulemaking plan to standardize the process for partial site releases. The Commission

CONTACT:
W. Mike Ripley
NRR/DRIP/RGEB
301-415-1112

approved the rulemaking plan in a staff requirements memorandum (SRM) issued on April 26, 2000.

DISCUSSION:

The proposed rule (Attachment 1) would add a new section to 10 CFR Part 50, separate from the current decommissioning and license termination rules. The new section describes the criteria and the regulatory framework that a licensee must use to request NRC approval for a partial site release before NRC approval of its LTP.

The proposed rule focuses on power reactor licensees of operating plants and decommissioning plants. It does not pertain to materials or non-power reactor licensees, nor does it provide for releases under restricted conditions.

In order for the staff to evaluate the adequacy of the licensee's plans for partial site release, the proposed rule requires licensees to submit information necessary to demonstrate the following:

- Compliance with the radiological criteria for unrestricted use of 10 CFR Part 20, Subpart E, Section 1402 (0.25 mSv/yr [25 mrem/yr] and as low as reasonably achievable).
- Continued compliance with all other applicable regulatory requirements that may be affected by the release of property and changes to the site boundary.
- That records of property line changes and the radiological conditions of partial site releases are being maintained to ensure that the dose from residual material associated with these releases can be accounted for at the time of any subsequent partial releases and at the time of license termination.

The approval process by which the property is released depends on the potential for residual radioactivity remaining in the area. For proposed release areas classified as *non-impacted* and, therefore, having no reasonable potential for residual radioactivity, the staff can approve the release of the property by letter, provided the release of the property would have no adverse effect on reactor safety. For areas classified as impacted and, therefore, having some potential for residual radioactivity, the rulemaking requires a licensee to submit release information in the form of a license amendment for approval. The amendment must include demonstration of the licensee's compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402 (0.25 mSv/yr [25 mrem/yr] to the average member of the critical group and as low as reasonably achievable). In both cases, public participation requirements and additional recordkeeping are addressed.

The above approval approach is a departure from that presented to the Commission in SECY-00-0023 in February 2000. At that time, it was thought that if a licensee could demonstrate that the radioactivity associated with any residual material remaining after remediation of impacted areas was no longer distinguishable from the background radioactivity, the approval could be treated in the same manner as a non-impacted area, and the release area could be approved by letter as opposed to license amendment. However, the ability to distinguish residual radioactivity from background depends on the detection of non-background radionuclides or a statistical dose increment above background, such as the 10 CFR Part 20, Subpart E, radiological release criteria. Minimum radionuclide concentrations from licensed operations have been proposed in the past, however there are no values

currently endorsed by the NRC. The proposed release area's classification as either impacted or non-impacted remains a criterion for determining whether the release may be approved by letter, or whether a license amendment is required. Guidance for demonstrating that a proposed release area is non-impacted is contained in NUREG-1575, Revision 1, "Multi-agency Radiation Survey and Site Investigation Manual (MARSSIM)."

Some reactor licenses may contain a license condition or a technical specification with a detailed description of the site boundary (e.g., a site map). Because the site boundary will change, the proposed rule would require these licensees to submit a license amendment application regardless of the potential for residual radioactivity and regardless of the detail of the site boundary description.

As stated in SECY-00-0023, the staff believes that informal Part 2, Subpart L, hearings are appropriate for hearings requested in response to an amendment for a partial site release. The proposed rule for partial site release would add a new paragraph to the existing § 2.1201(a) providing for informal hearings in accordance with Subpart L, if a hearing is conducted for a licensee's planned release for unrestricted use. It is recognized, however, that the Commission has recently approved with comment a proposed rule (SECY-00-0017) that would expand the use of informal hearing procedures to include amendments such as those for partial site releases. An amendment to Part 2, Subpart L, would not be required to permit use of these informal hearing procedures for partial site release amendments, if the proposed rulemaking of SECY-00-0017 is adopted as a final rule. The staff will continue to monitor the progress of the rulemaking and delete the amendment to Part 2 from the final partial site release rule as appropriate.

The proposed rulemaking includes provisions for public participation. The staff will notice receipt of a licensee's proposal for a partial site release regardless of the potential for residual radioactivity, and make the proposal available for public comment. The staff also will hold a public meeting in the vicinity of the site to discuss the licensee's request for approval or license amendment application, as applicable, and obtain comments before approving the release.

Additionally, depending on the nature and extent of comments received on the proposed rule, the staff may hold one or two stakeholder workshops or other public meetings before issuance of the final rule, as a means of soliciting additional industry and public input on the proposed rulemaking.

A regulatory analysis was developed (Attachment 2) that evaluates the need for and the consequences of the proposed rulemaking.

An environmental assessment with a finding of no significant environmental impact is provided in Attachment 3.

In developing the proposed rule, the staff carefully reviewed the comments and guidance in the Commission's SRM of April 26, 2000. Attachment 4 describes how the staff addressed the SRM guidance.

RESOURCES:

Estimated resources necessary to complete this action are 2.75 FTE for NRR (1.25 FTE in

FY 2001 and 1.5 FTE in FY 2002) and 0.1 FTE and \$69,000 for NMSS (in FY 2001). These resources are currently budgeted for this purpose.

SCHEDULE:

The proposed schedule milestones for the rulemaking are as follows:

Publish proposed rule: Date of Commission's SRM for proposed rule plus 4 weeks.
Final rule to Commission: Date of Commission's SRM for proposed rule plus 12 months.

COORDINATION:

The Office of the General Counsel has no legal objection to the proposed rulemaking. The Office of the Chief Financial Officer has reviewed this Commission paper for resource implications and has no objections. The Office of the Chief Information Officer has reviewed the proposed rule for information technology and information management implications and concurs in it. However, the rule suggests changes in information collection requirements that must be submitted to the Office of Management and Budget (OMB) no later than the day the proposed rule is forwarded to the *Federal Register* for publication.

RECOMMENDATION:

That the Commission:

1. Approve publication in the *Federal Register* of the attached notice of proposed rulemaking (Attachment 1).
2. Certify that this rule, if adopted, will not have a significant impact on a substantial number of small entities and satisfies the requirements of the Regulatory Flexibility Act, 5 U.S.C. 605(b).

Note:

- a. The Notice of Proposed Rulemaking (Attachment 1) will be published in the *Federal Register* for a 75-day public comment period.
- b. The Regulatory Analysis (Attachment 2) and the Environmental Assessment (Attachment 3) will be available in the Public Document Room.
- c. The Chief Counsel for Advocacy, Small Business Administration, will be informed of the certification regarding economic impact on small entities and the reasons for it, as required by the Regulatory Flexibility Act.
- d. The appropriate congressional committees will be informed.
- e. The proposed rule contains information collection requirements that are subject to review by the OMB. An OMB review package is being prepared and will be submitted to OMB in the near future.
- f. A press release will be issued by the Office of Public Affairs when the proposed rulemaking is filed with the Office of the Federal Register.

- g. Copies of the *Federal Register* notice of proposed rulemaking will be distributed to all power reactor licensees. The notice will be sent to other interested members of the public upon request.
- h. The staff will request comments on the proposed rulemaking package (including the Environmental Assessment [Attachment 3]) from State Liaison Officers.

/RA/

William D. Travers
Executive Director
for Operations

Attachments:

1. Draft *Federal Register* Notice
2. Draft Regulatory Analysis
3. Environmental Assessment
4. Disposition of SRM-SECY-00-0023 Issues

ATTACHMENT 1

Draft *Federal Register* Notice

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 2, 20, and 50

RIN 3150 - AG56

Releasing Part of a Power Reactor Site or Facility for Unrestricted Use

Before the NRC Approves the License Termination Plan

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations to standardize the process for allowing a power reactor licensee to release part of its facility or site for unrestricted use before NRC approves the license termination plan (LTP). This type of release is termed a “partial site release.” The proposed rule would identify the criteria and regulatory framework that a licensee would use to request NRC approval for a partial site release and provide additional assurance that residual radioactivity would meet the radiological criteria for license termination, even if parts of the site were released before a licensee submits its LTP to the NRC. Also the proposed rule would clarify that the radiological criteria for unrestricted use apply to a partial site release.

DATES: The comment period expires on **[75 days after publication in the Federal Register]**.

Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date.

ADDRESSES: Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff. Deliver comments to 11555 Rockville Pike, Rockville, Maryland, between 7:30 am and 4:15 pm on Federal workdays.

You also may provide comments via the NRC's interactive rulemaking Website (<http://ruleforum.llnl.gov>). This site provides the capability to upload comments as files (any format), if your Web browser supports that function. For information about the interactive rulemaking Website, contact Ms. Carol Gallagher, (301) 415-5905, e-mail: cag@nrc.gov.

Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the ADAMS Public Library component on the NRC Web site (the Electronic Reading Room), www.nrc.gov.

FOR FURTHER INFORMATION CONTACT: Mr. W. Mike Ripley, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; telephone: 301-415-1112; or by Internet electronic mail to wmr@nrc.gov.

SUPPLEMENTARY INFORMATION:

Background

Compliance with the decommissioning and license termination rules of 10 CFR Parts 20, and 50 ensure adequate protection to the public and the environment from any radioactivity remaining in the facility and site when the reactor license is terminated. The NRC staff makes

its determination that the licensee has met the license termination criteria using information submitted by the licensee in its LTP and final radiation survey. The LTP is not required until 2 years before the anticipated date of license termination. The license termination radiation survey is not required until after the licensee completes its decontamination activities. These requirements were based on the NRC's anticipation that reactor licensees would permanently cease operations and then perform the decommissioning and license termination of the site as one large project. However, in 1999, a licensee informed the staff that it intended to sell parts of its facility and site before it permanently ceased operations. It was not clear whether NRC approval was required for the sale. As a result, the staff was faced with the need to evaluate the adequacy of the licensee's proposed action before the licensee was required to submit the information required by the LTP and the final radiation survey.

In evaluating the staff's response to the proposed sale of parts of the licensee's facility and site, a number of actions specific to the case were taken to ensure that the property would meet the radiological release criteria for unrestricted use of 10 CFR Part 20, Subpart E.

However, the NRC recognized that the current regulations in 10 CFR Part 50 do not address the release of part of a reactor facility or site for unrestricted use, or require a licensee to obtain NRC approval of a partial site release. Thus, there is not a specific requirement to meet the release criteria under 10 CFR Part 20, Subpart E, for a partial site release. The NRC also noted that for purposes of Subpart E, the boundary of a site is defined in 10 CFR 20.1003 as "that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee." One could argue as a consequence of this definition that the "site," which is licensed under 10 CFR Part 50 and is subject to the license termination and decommissioning requirements of 10 CFR 50.82 and 10 CFR Part 20, Subpart E, can be changed by selling the property.

The purpose of the License Termination Rule (LTR) [61 FR 39301; July 29, 1996, as amended at 62 FR 39091; July 21, 1997] and 10 CFR 50.82 is to ensure that the residual radioactivity for the licensed activity is within the criteria of the LTR. To avoid licensees taking a piecemeal approach to license termination, the LTP must consider the entire site as defined in the original license, along with subsequent modifications to the site boundary, to ensure that the entire area meets the radiological release requirements of 10 CFR Part 20, Subpart E, at the time the license is terminated. Therefore, the purpose of the LTR is to consider the whole site for application of the release criteria. That is, any site area controlled during the term of the license must be considered. The proposed rule would clarify this purpose and not establish new policies or standards. Although no further surveys of previously released areas are anticipated, the dose assessment in the LTP must account for possible dose contributions associated with previously released areas in order to ensure that the entire area meets the radiological release requirements of 10 CFR Part 20, Subpart E, (0.25 mSv/yr [25 mrem/yr] reduced to as low as reasonably achievable [ALARA]) at the time the license is terminated. The proposed requirement that licensees maintain records of property line changes and the radiological conditions of partial site releases ensures that these potential dose contributions can be adequately considered at the time of any subsequent partial releases and at the time of license termination. Specific guidance to assist licensees in identifying and accounting for these potential dose contributions is currently being developed, and will be available before publishing the final rule.

The proposed rule would, therefore, provide greater assurance that residual radioactivity from licensed activities that remains in areas released for unrestricted use will meet the radiological criteria for license termination. It should increase public confidence in decisions to release parts of reactor sites and make more efficient use of NRC and licensee resources.

The NRC staff has obtained preliminary input from stakeholders at several public workshops. The suggested approach to handling requests for partial site release for unrestricted use was presented to the attendees for comment. Utility and nuclear industry representatives indicated that licensees need a method to allow them to release parts of a site before NRC approves the LTP. Utility representatives stated that formal NRC action would be desirable to provide finality and legal closure after part of a reactor site or facility is released. Although there were no negative comments received from representatives of public interest groups attending the workshops, a number of questions were raised on the implementation of the proposed rule. These questions have been addressed below, or added to the Issues for Public Comment section in order to solicit further public comment. Depending on the comments received on this proposed rule, the NRC may hold additional workshops or other public meetings before issuance of the final rule in order to solicit further stakeholder input.

Discussion of Proposed Rule

The strategy for developing the proposed rule is to narrow its applicability to power reactor licensees to be responsive to current industry needs while also protecting the health and safety of the public. A separate rulemaking would be needed to address the wide variety of materials sites, many of which are technically more complex from a decommissioning perspective than reactor sites, to provide a uniform and consistent agency approach to partial site release. The proposed rule would require NRC approval for a partial site release at a reactor site before NRC approval of the licensee's LTP.

The approval process by which the property is released depends on the potential for residual radioactivity from plant operations remaining in the area to be released. First, for

proposed release areas classified as *non-impacted* and, therefore, having no reasonable potential for residual radioactivity, the licensee would be allowed to submit a letter request for approval of the release containing specific information for NRC approval. In these cases, as there is no reasonable potential for residual radioactivity, NRC would approve the release of the property by letter upon determining that the licensee has otherwise met the criteria of the proposed rule and no change to a license or technical specifications description of the site is necessary. Guidance for demonstrating that a proposed release area is *non-impacted* is contained in NUREG-1575, Revision 1, "Multi-agency Radiation Survey and Site Investigation Manual (MARSSIM)." NRC would generally not perform radiological surveys and sampling of a non-impacted area. However, should NRC deem surveys and sampling as being needed, such would be done as part of NRC's inspection process. Second, for areas classified as impacted and, therefore, having some potential for residual radioactivity, the licensee would submit the required information in the form of a license amendment for NRC approval. The proposed amendment also would include the licensee's demonstration of compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402. Regulatory guidance for performing this demonstration is contained in NUREG-1727, "NMSS Decommissioning Standard Review Plan." In both cases, public participation requirements and additional record keeping would be addressed.

This approval approach is a departure from that presented to the Commission in the NRC staff's rulemaking plan (SECY-00-0023, February 2, 2000). At that time, it was thought that if a licensee could demonstrate that the radioactivity associated with any residual material remaining after remediation of impacted areas was no longer distinguishable from the background radioactivity, the approval could be treated in the same manner as a non-impacted area, and the release area could be approved by letter as opposed to a license amendment.

However, the ability to distinguish residual radioactivity from background depends on the detection of non-background radionuclides or a statistical dose increment above background, such as the 10 CFR Part 20, Subpart E, radiological release criteria. Minimum radionuclide concentrations from licensed operations have been proposed in the past, however there are no values currently endorsed by the NRC. The proposed release area's classification as either impacted or non-impacted remains a criterion for determining whether the release may be approved by letter, or whether a license amendment is required. Guidance for demonstrating that a proposed release area is non-impacted is contained in NUREG-1575, Revision 1.

Subpart K of 10 CFR Part 20 provides in § 20.2002 that a licensee may request NRC approval of a proposed disposal method that is not otherwise authorized by NRC regulations. Some have argued that a partial site release should be covered by § 20.2002; however, a partial site release leaving residual radioactivity at a site that meets the release criteria for unrestricted use of 10 CFR 20.1402 is not considered a disposal. In any case, the proposed rule, if adopted, would authorize partial site releases, thereby removing the argument that a partial site release is within the scope of § 20.2002. Additionally, any disposals made under § 20.2002 on those portions of the site proposed for release will be considered impacted areas.

In contrast to the license termination process, the proposed rule does not require a license amendment to release property for unrestricted use in all cases. The NRC believes this difference is justified for the following reasons. First, the license termination process was created to deal with the facility or site as a whole, which inevitably involves handling residual radioactivity, such as that found in plant systems. The proposed rule preserves the license amendment approach for those cases in which the potential exists for residual radioactivity and requires that the area meets the radiological criteria for unrestricted use. Second, for cases in which the change does not adversely affect reactor safety and it is demonstrated that the area is

non-impacted and, therefore, there is no reasonable potential for residual radioactivity, a license amendment is not required to adequately protect public health and safety. The proposed rule with its clearly defined criteria would be sufficient. The NRC's oversight role is to ensure that the licensee meets the criteria.

The proposed rule would amend 10 CFR Part 2 to provide an opportunity for a Subpart L hearing on the amendment. The hearing, if conducted, must be completed before the property is released for use. However, for cases where it is demonstrated that the area is non-impacted and, therefore, there is no reasonable potential for residual radioactivity, a license amendment is not required by the proposed rulemaking. A review of a licensee's proposed partial site release in such cases is essentially a compliance review to determine if the release would otherwise meet the defined criteria of the regulation. Assuming the partial site release does not result in a change to an existing license, the approval of the partial site release under these circumstances does not require a license amendment (see *Cleveland Electric Illuminating, et al.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 328 (1996)). In these cases, the required public meeting held before the release approval is granted will serve as a forum for public comments on the proposed release.

In some cases, a reactor or site-specific Independent Spent Fuel Storage Installation (ISFSI) license may contain license conditions or Technical Specifications that define the site boundary in detail, such as a site map. In these cases (because the site boundary would change), a reactor licensee would be required to submit a license amendment application for a partial site release regardless of the potential for residual radioactivity in the area to be released. However, under current regulations, a licensee could amend its license to remove the definition of site boundary, without reference to a partial site release, and then proceed to perform the

release, without obtaining NRC approval. The proposed rule would require NRC approval for a partial site release regardless of the amount of detail defining the site in the operating license.

The proposed rule provides for public participation. The NRC would notice receipt of a licensee's proposal for a partial site release, regardless of the potential for residual radioactivity, and make it available for public comment. In addition to the opportunity for a hearing on a license amendment, the NRC also would hold a public meeting in the vicinity of the site to discuss the licensee's request for approval or license amendment application, as applicable, and obtain comments before approving the release.

Members of the public have expressed concern that a licensee could use a series of partial site releases to avoid applying the criteria of the license termination rule. Members of the public are concerned that the lack of specific regulation for partial site releases could result in inconsistent application of safety standards and insufficient regulatory oversight of licensee actions. They also note that the public participation requirements of the license termination rule do not specifically apply to a partial site release. The proposed rule would address these concerns.

The proposed rule would not provide for a partial site release under restricted conditions, nor has any reactor licensee expressed interest in releasing property for restricted use.

The proposed rule would apply only to cases in which a reactor licensee intends to perform a partial site release before the NRC approves its LTP. When an LTP is submitted, a licensee can propose releasing its site in stages if it so desires. The NRC staff will evaluate the licensee's plan and approve it, if it is adequate, by license amendment. Once the LTP is approved, there is no longer any need for a separate regulatory mechanism for partial site releases.

In addition, the provisions of the “timeliness in decommissioning” rule for materials facilities in 10 CFR 30.36, 40.42, 70.38, and 72.54 do not apply to a partial site release at a power reactor site. These rules were issued to avoid long periods of delay in decommissioning materials facilities following cessation of operations. Unlike reactor facilities, where a period of safe storage can result in reduced occupational radiation exposure for decommissioning, materials facilities do not always realize much dose reduction benefit from an extended period of storage.

Sections 30.36, 40.42, 70.38, and 72.54 require decommissioning to begin within 24 months of cessation of principal activities, even if only a part of the site is not used, and whether or not a licensee declares an end to operations. In contrast, 10 CFR 50.82, the license termination rule for reactors, requires a licensee to certify the permanent cessation of operations before the decommissioning time clock starts. A reactor licensee has the option to begin decommissioning at any time following the submittal of certain certifications and reports, as long as decommissioning is completed within 60 years following permanent shutdown. This option allows for a period of safe storage that results in reduced occupational exposure.

The partial site release proposed rule would make the following changes to 10 CFR Part 50:

- ! Add a new section, separate from the license termination process of § 50.82, to address the release of part of a reactor facility or site for unrestricted use before the LTP is approved.

- ! Specify criteria for the licensee to fulfill to obtain NRC approval of a partial site release.

- ! Allow a written request for release approval and not require a license amendment for releases of property if the licensee demonstrates that the area is non-impacted and, therefore, there is no reasonable potential for residual radioactivity in the area to be released. The release would be approved if all the proposed criteria are met.

- ! Require a license amendment that contains the licensee's demonstration of compliance with the radiological criteria for unrestricted use (0.25 mSv/yr [25 mrem/yr] and ALARA) for releases of property in which the area is classified as impacted and, therefore, a reasonable potential for residual radioactivity in the area to be released exists.

- ! Revise the LTP requirements to account for property that was released before a licensee received approval of its LTP.

- ! Require the NRC to hold a public meeting to inform the public of the partial site release request and receive public comments before acting on the request.

- ! Require additional record keeping of the acquisition and disposition of property included in the site.

- ! Add supporting definitions of key terms.

The partial site release proposed rule would make the following changes to 10 CFR

Part 20:

! Include releasing part of a facility or site for unrestricted use within the scope of the radiological criteria for license termination.

! Include releasing part of a facility or site for unrestricted use within the scope of the criteria by which the NRC may require additional cleanup on receiving new information following the release.

The partial site release rulemaking would make the following change to 10 CFR Part 2:

! Provide for informal hearings in accordance with Subpart L for amendments associated with partial site releases.

Section-by-Section Analysis

10 CFR Part 2, Subpart L, "Informal Hearing Procedures for Adjudications in Materials and Operator Licensing Proceedings"

Informal hearing procedures are specified in 10 CFR Part 2, Subpart L.

Section 2.1201(a)(1) applies to materials licenses under Parts 30, 40, and 70 and would apply to the partial release of materials sites. Section 2.1201(a)(3) applies to requests for a hearing for amendments to a Part 50 license for licensees that have certified permanent cessation of operations and permanent removal of fuel from the reactor and permanently removed fuel from the Part 50 facility. It applies to decommissioning reactors that have either removed spent fuel

from the site, or have placed it in an independent spent fuel storage installation licensed under Part 72.

The NRC believes that conditions in a part of a facility or site released for unrestricted use are equivalent to the conditions specified in § 2.1201(a)(3). The proposed amendment underlying the hearing request would principally address the transfer of land, and not plant operations. This approach is similar to the treatment of materials licensing issues that are currently subject to Subpart L under § 2.1201(a)(1).

An amendment to 10 CFR Part 2, Subpart L, is required to permit use of these informal hearing procedures for amendments associated with partial site releases at nuclear power reactors. It should be noted that the proposed rule does not provide for license amendments to authorize partial site releases where there is no reasonable potential for residual radioactivity in the area to be released. As there are no license amendments in these cases, there are no corresponding opportunities for hearings. However, public meetings will be noticed in these cases to obtain comments before NRC action on the release.

10 CFR Part 20, "Standards for Protection Against Radiation"

In 10 CFR Part 20, the NRC provides standards for protection against radiation. These standards are applicable to reactor licensees as long as they hold a license. The subparts relevant to the partial site release issue are Subpart D ("Radiation Dose Limits for Individual Members of the Public") and Subpart E ("Radiological Criteria for License Termination").

10 CFR Part 20, Subpart D, "Radiation Dose Limits for Individual Members of the Public"

The radiation dose limits specified in 10 CFR Part 20, Subpart D, set the annual limit for an individual member of the public at 1.0 mSv/yr (100 mrem/yr). However, there are a number

of more stringent dose standards applicable to power reactor licensees that must also be considered. These standards include the Environmental Protection Agency (EPA) environmental radiation standard incorporated in § 20.1301(d), the Subpart D compliance standards in § 20.1302(b), the radiological effluent release objectives to maintain effluents ALARA in Appendix I to 10 CFR Part 50, and any dose standards which may be established by special license conditions.

A licensee performing a partial site release must continue to comply with the public dose limits and standards as they pertain to the area remaining under the license. In addition, the licensee must comply with the public dose limits for effluents, etc., entering the released portion of the site. As a practical matter, a licensee must demonstrate that moving its site boundary closer to the operating facility would not result in a dose to a member of the public that exceeds these criteria. If residual radioactivity exists in the area to be released for unrestricted use, the dose caused by the release must be considered along with that from the licensee's facility, as well as, for the case of the EPA's standard incorporated in § 20.1301(d), that from any other uranium fuel cycle operation in the area, for example a facility licensed under 10 CFR Part 72, to determine compliance with the above standards. As a consequence, a partial site release for unrestricted use that contains residual radioactivity may have to meet a standard lower than the radiological criteria of 10 CFR Part 20, Subpart E, discussed below because the combined dose from the partial site release and the dose from these other sources must meet the public dose limits and standards described above.

10 CFR Part 20, Subpart E, "Radiological Criteria for License Termination"

The scope of Subpart E applies to decommissioning reactor facilities. However, as currently written, it does not specifically apply to operating reactors. The reactor remains "operating" until a licensee submits the certifications of permanent cessation of operations specified in § 50.82(a)(1), when it becomes "decommissioning."

Radiological criteria for license termination contained in 10 CFR Part 20, Subpart E, limit radiation exposure to the "average member of the critical group." The limit applicable to release for unrestricted use is 0.25 mSv/yr (25 mrem/yr) total effective dose equivalent (TEDE), with additional reductions consistent with the ALARA principle. The determination of ALARA in these cases explicitly requires balancing reduction in radiation risk with the increase from other health and safety risks resulting from the work done to decontaminate a site, such as adverse health impacts from transportation accidents that might occur if larger amounts of waste soil are shipped for disposal. The standard applies to doses resulting from "residual radioactivity distinguishable from background radiation" and includes dose from groundwater sources of drinking water. The standard for unrestricted use in 10 CFR Part 20, Subpart E, does not include dose from effluents or direct radiation from continuing operations. However, as noted in the above section on public dose limits, the dose from these sources must be considered when demonstrating compliance with the radiological release criteria.

Section 20.1401(c) limits additional cleanup following the NRC's termination of the license. Additional cleanup would only be required if new information reveals that the requirements of Subpart E were not met and a significant threat to public health and safety remains from residual radioactivity. Similarly, the proposed rule would include the portions of the

site released for unrestricted use within the scope of the criteria by which the Commission may require additional cleanup on the basis of new information received following the release.

The proposed rulemaking is intended to apply Subpart E to power reactor licensees, both operating and decommissioning, that have not received approval of the LTP. Because an LTP is required for license termination under restricted conditions (§ 20.1403(d)) or alternate criteria (§ 20.1404(a)(4)), only the “unrestricted use” option would be available to licensees for a partial site release before receiving approval of the LTP.

The proposed rule would not require an analysis to demonstrate that the area to be released meets the criteria of § 20.1402 for cases in which the licensee is able to demonstrate that there is no reasonable potential for residual radioactivity in the area to be released. In these cases, compliance with § 20.1402 is demonstrated by providing documentation of an evaluation of the site to identify areas of potential or known sources of radioactive material that concludes that the area is non-impacted and there is, therefore, no reasonable potential for residual radioactivity. Acceptable guidance describing the performance of this demonstration is contained in NUREG-1575, Revision 1.

For areas classified as impacted, the proposed rule would require a license amendment that includes a demonstration of compliance with § 20.1402 for the area that is released for unrestricted use. Guidance for performing this classification is contained in NUREG-1727. This guidance can be used to support a license amendment request for partial site release.

An amendment to Part 20, Subpart E, that revises § 20.1401(a)(4) and § 20.1401(c) would add the release of part of a facility or site for unrestricted use to the provisions and scope of 10 CFR Part 20, Subpart E.

10 CFR 50.2, "Definitions"

The NRC issued technical guidance after the decommissioning rules of § 50.82 were amended in 1996. Those documents included NUREG-1575 which defined terms (historical site assessment, impacted, and non-impacted) that are critical to implementing the amended regulations. In order for a licensee to adequately demonstrate compliance with the radiological criteria for license termination in 10 CFR Part 20, Subpart E, the licensee must evaluate its site to identify areas of potential or known sources of radioactive material and classify those areas according to the potential for radioactive contamination. The evaluation is known as a *historical site assessment*. The historical site assessment is an investigation to collect information describing a site's complete history from the start of site activities to the present time. Information collected will typically include site files, monitoring data, and event investigations, as well as interviews with current or previous employees to collect firsthand information. The assessment results in classifying areas according to the potential for containing residual radioactivity. Areas that have no reasonable potential for residual radioactivity in excess of natural background or fallout levels are classified as *non-impacted areas*. Areas with some potential for residual radioactivity in excess of natural background or fallout levels are classified as *impacted areas*. Further discussion regarding the meaning and use of these terms is contained in NUREG-1575.

An amendment to § 50.2 would add the definitions for "Historical Site Assessment," "Impacted Areas," and "Non-impacted Areas."

10 CFR 50.75, "Reporting and Record keeping for Decommissioning Planning"

In § 50.75(c), the NRC defines the amount of financial assurance required for decommissioning power reactors. There is no provision to adjust the amount to account for the costs of a partial site release. One point of view argues that a partial site release would reduce the cost of decommissioning for the remainder of the site. However, the NRC does not recommend reducing the required amount for the following reasons. Costs incurred for purposes other than reduction of residual radioactivity to permit release of the property and termination of the license are not included in the amount required for decommissioning financial assurance. A partial site release may incur costs that do not fit the definition of decommissioning. Therefore, an evaluation of the costs would be necessary to determine what adjustment, if any, was appropriate. In addition, the cost of a partial site release is expected to be a small fraction of the cost of decommissioning. Such a small adjustment can be considered within the uncertainty range of the amount specified in § 50.75(c) and does not provide a compelling reason to undertake the technical justification of adding a generically applicable adjustment factor to the requirement.

In § 50.75(g), the NRC requires keeping records of information important to decommissioning. Currently, there are three categories of information required: (1) spills resulting in significant contamination after cleanup; (2) as-built drawings of structures and equipment in restricted areas; and (3) cost estimates and funding methods. Information on structures and land that were included as part of the site is also important to decommissioning in order to ensure that the dose effects from partial releases are adequately accounted for when the license is terminated.

Records relevant to decommissioning must be retained until the license is terminated. The proposed rule would require a licensee to identify its facility and site, as defined in the original license, to include a map, and to record any additions to or deletions from the site since

original licensing, along with records of the radiological conditions of any partial site releases. These records will ensure that potential dose contributions associated with partial site releases can be adequately considered at the time of any subsequent partial releases and at the time of license termination.

10 CFR 50.82, "Termination of License"

Section 50.82(a)(9) requires the submittal of an application for license termination that includes an LTP. Section 50.82(a)(11) requires that the NRC make a determination that the final survey and associated documentation provided by a licensee demonstrate that the site is suitable for release at the time the license is terminated. These sections codify the NRC's views that (1) certain information is required to evaluate the adequacy of a licensee's compliance with the radiological criteria for license termination in 10 CFR Part 20, Subpart E, and (2) the license termination criteria are applicable to the entire site. However, because the LTP is not required until 2 years before the anticipated date of license termination, a licensee may perform a partial site release before it submits the necessary information. The information required when the LTP is submitted refers to the "site." It is not clear that a licensee could be required to include the areas released because they no longer are part of the "site." The NRC is concerned that a licensee could adopt partial site release as a piecemeal approach to relinquish responsibility for a part of its site without going through the license termination process and ensuring that the release criteria of 10 CFR Part 20, Subpart E, are met.

A new paragraph, § 50.82(a)(9)(ii)(H), would include the identification of parts of the site released for unrestricted use before approval of the LTP with the information listed in the LTP.

An amendment to § 50.82(a)(11)(ii) would require that the final radiation survey and associated LTP documentation, demonstrating that the site is suitable for release in accordance with the criteria in 10 CFR Part 20, Subpart E, include any parts released for use before approval of the LTP. Although no further surveys of previously released areas are anticipated, the dose assessment in the LTP must account for possible dose contributions associated with previous releases in order to ensure that the entire area meets the radiological release requirements of 10 CFR Part 20, Subpart E (0.25 mSv/yr [25 mrem/yr] reduced to ALARA) at the time the license is terminated. The proposed requirement that records of property line changes and the radiological conditions of partial site releases be maintained by licensees would ensure that these potential dose contributions can be adequately considered at the time of any subsequent partial releases and at the time of license termination. Specific guidance to assist licensees in identifying and accounting for these potential dose contributions is currently being developed.

10 CFR 50.83, "Release of Part of a Facility or Site for Unrestricted Use"

The proposed rule would add a new § 50.83, separate from the current decommissioning and license termination rules, that identifies the criteria and regulatory framework for power reactor licensees that seek to release part of a facility or site for unrestricted use at any time before receiving approval of an LTP.

The proposed rule would require NRC approval for a partial site release. The approval process by which the property is released would depend on the potential for residual radioactivity from plant operations remaining in the area to be released. First, for proposed release areas classified as *non-impacted* and, therefore, having no reasonable potential for residual radioactivity, the licensee would be allowed to submit a letter request for approval of the release

containing specific information for NRC approval. Because there is no reasonable potential for residual radioactivity in these cases, NRC would approve the release of the property by letter after determining that the licensee has met the criteria of the proposed rule. Guidance for demonstrating that a proposed release area is *non-impacted* is contained in NUREG-1575, Revision 1. NRC would generally not perform radiological surveys and sampling of a non-impacted area. However, should NRC deem surveys and sampling as being needed, such would be done as part of NRC's inspection process. Second, for areas classified as impacted and, therefore, do have some potential for residual radioactivity, the licensee would submit the required information in the form of a license amendment for NRC approval. The proposed amendment also would include the licensee's demonstration of compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402. Regulatory guidance for performing this demonstration is contained in NUREG-1727.

Licensees may find it beneficial to review their survey plans and design with the NRC staff before performing the surveys. As warranted, NRC will conduct parallel and/or confirmatory radiation surveys and sampling to ensure that the licensee's conclusions are adequate.

The proposed rule is intended to apply 10 CFR Part 20, Subpart E, to reactor licensees that have not received approval of the LTP. Because an LTP is required for license termination under restricted conditions (§ 20.1403(d)) or alternate criteria (§ 20.1404(a)(4)), only the "unrestricted use" option would be available to licensees for a partial site release before receiving approval of the LTP.

The proposed rule also would require a licensee to evaluate the effect of releasing the property to ensure that it would continue to comply with all other applicable regulatory requirements that may be impacted by the release of property and changes to the site boundary.

This would include, for example, regulations in 10 CFR Parts 20, 50, 72, and 100. In those instances involving license amendments, licensees also would be required to provide a supplement to the existing environmental report to address the planned release. This requirement is similar to the requirement of 10 CFR 50.82(a)9(ii)G.

The proposed rule provides for public participation. The NRC will notice receipt of a licensee's proposal for a partial site release, regardless of the amount of residual radioactivity involved, and make it available for public comment. The NRC also will hold a public meeting in the vicinity of the site to discuss the licensee's release approval request or license amendment application, as applicable.

Issues for Public Comment

The NRC encourages comments concerning the content, level of detail specified, and the implementation of the proposed amendments. Suggestions or alternatives other than those described in this document and estimates of cost for implementation are encouraged. The NRC is particularly interested in receiving comments on the following issues related to this proposed rule:

1. Are there rulemaking alternatives to this proposed rule that were not considered in the regulatory analysis for this proposed rule?
2. Are the proposed definitions in § 50.2 clear?
3. Is public involvement adequately considered?
4. Should the license amendment process be required for all partial site release approvals, regardless of whether the site has been classified as non-impacted?

5. Does the proposed rule make it adequately clear that licensees consider the fact that, when performing partial site releases and when releasing the entire site at license termination, potential dose contributions from previous partial releases must be considered when demonstrating compliance with the radiological release criteria?
6. Is there reason to limit the size or number of partial site releases?
7. Are there other potential impacts on continued operation or decommissioning activities as a result of partial site releases that should specifically be considered in the rule?

Referenced Documents

Copies of NUREG-1575, NUREG-1727, and SECY-00-0023 may be examined, and/or copied for a fee, at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. These documents are also accessible on the NRC Web site at www.nrc.gov.

Plain Language

The Presidential memorandum dated June 1, 1998, entitled "Plain Language in Government Writing" directed that the Government's writing be in plain language. This memorandum was published on June 10, 1998 (63 FR 31883). In complying with this directive, editorial changes have been made in this proposed rule to improve readability of the existing language of those provisions being revised. These types of changes are not discussed further

in this document. The NRC requests comment on the proposed rule specifically with respect to the clarity and effectiveness of the language used. Comments should be sent to the address listed under the ADDRESSES heading.

Voluntary Consensus Standards

The National Technology Transfer and Advancement Act of 1995, Pub. L. 104-113, requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standard bodies unless the use of such a standard is inconsistent with applicable law or is otherwise impractical. In this proposed rule, the NRC proposes to standardize the process for allowing a licensee to release part of its reactor facility or site for unrestricted use before NRC approves the LTP. This proposed rule would not constitute the establishment of a standard that establishes generally applicable requirements, and the use of a voluntary consensus standard is not applicable.

Finding of No Significant Environmental Impact: Availability

The Commission has determined that under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51 that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement is not required.

There are no significant radiological environmental impacts associated with the proposed action. The proposed action does not involve non-radiological plant effluents and has no other

environmental impact. Therefore, NRC expects that no significant environmental impact would result from the proposed rule.

The determination of the environmental assessment is that there would be no significant offsite impact to the public from this action. However, the general public should note that the NRC is seeking public participation. Comments on any aspect of the environmental assessment may be submitted to the NRC as indicated under the ADDRESSES heading.

The NRC has sent a copy of the environmental assessment and this proposed rule to every State Liaison Officer and requested their comments on the environmental assessment.

Paperwork Reduction Act Statement

This proposed rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). This rule has been submitted to the Office of Management and Budget (OMB) for review and approval of the information collection requirements.

The burden to the public for this information collection is estimated to average 462 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. The U.S. Nuclear Regulatory Commission is seeking public comment on the potential impact of the information collections contained in the proposed rule and on the following issues:

1. Is the proposed information collection necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?
2. Is the estimate of burden accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?
4. How can the burden of the information collection be minimized, including the use of automated collection techniques?

Send comments on any aspect of this proposed information collection, including suggestions for reducing the burden, to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail at bjs1@nrc.gov; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0011), Office of Management and Budget, Washington, DC 20503.

Comments to OMB on the information collections or on the above issues should be submitted by **(insert date 30 days after publication in the Federal Register)**. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after this date.

Public Protection Notification

If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

Regulatory Analysis

The Commission has prepared a regulatory analysis on this proposed regulation. The analysis examines the costs and benefits of the alternatives considered by the Commission. The regulatory analysis may be examined, and/or copied for a fee, at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. The Commission requests public comment on the regulatory analysis. Comments on the analysis may be submitted to the NRC as indicated under the ADDRESSES heading.

Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the Commission certifies that this proposed rule would not, if adopted, have a significant economic impact on a substantial number of small entities. This proposed rule would affect only the licensing and operation of nuclear power plants. The companies that own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the Small Business Size Standards set out in 10 CFR 2.810.

Backfit Analysis

The NRC has determined that the backfit rule does not apply to this proposed rule; therefore, a backfit analysis is not required for this proposed rule because it does not involve any provisions that would impose backfits as defined in 10 CFR 50.109(a)(1).

The proposed rule would clarify the application of the license termination rule (LTR) [61 FR 39301; July 29, 1996, as amended at 62 FR 39091; July 21, 1997] for partial site release and the relationship between partial site release and decommissioning of a site under 10 CFR 50.82. A backfit analysis was not required for the LTR because it did not involve reactor operations, and it was not required for 10 CFR 50.82 because that rule was imposed to ensure adequate protection of the public health and safety. Because a backfit analysis was not required for either the LTR or for 10 CFR 50.82, it does not appear that it would be needed for this rulemaking action.

Additionally, the purpose of the LTR and 10 CFR 50.82 is to ensure that the residual radioactivity from the licensed activity is within the criteria of the LTR. The LTR requires that any previously approved onsite disposals be reconsidered in determining releases under the LTR. As to previously approved offsite releases, Section F.2.3. of the Statement of Considerations for the final LTR describes a limited grandfathering of previously approved partial site releases. The NRC stated that guidance would be issued on how licensees should address previously released portions of licensed sites. Consequently, while a previously approved partial site release meeting the LTR criteria would not need to be reconsidered, absent new information in accordance with 10 CFR 20.1401(c), it was not the intent of the rule that interaction from the previously released residual radiation be excluded from consideration in the release decision for the remaining portions of the site. To read the LTR as not requiring the radiation interactions from the previously released site to be considered in making release determinations on the remaining site would permit a licensee to release a site that would otherwise not meet the LTR criteria by releasing the site by segments, each one below the criteria of the LTR. Such an approach would defeat the intent of the LTR to consider all the residual radioactivity from the

licensed activity in meeting the LTR criteria. This rulemaking would clarify the intent of the LTR and not establish new policies or standards.

Accordingly, the proposed rule's provisions do not constitute a backfit and a backfit analysis need not be performed. However, the staff has prepared a regulatory analysis that identifies the benefits and costs of the proposed rule and evaluates other options for addressing the identified issues. As such, the regulatory analysis constitutes a "disciplined approach" for evaluating the merits of the proposed rule and is consistent with the underlying intent of the backfit rule.

List of Subjects

10 CFR Part 2

Administrative practice and procedure, Antitrust, Byproduct material, Classified information, Environmental protection, Nuclear materials, Nuclear power plants and reactors, Penalties, Sex discrimination, Source material, Special nuclear material, Waste treatment and disposal.

10 CFR Part 20

Byproduct material, Criminal penalties, Licensed material, Nuclear material, Nuclear power plants and reactors, Occupational safety and health, Packaging and containers, Radiation

protection, Reporting and record keeping requirements, Source material, Special nuclear material, Waste treatment and disposal.

10 CFR Part 50

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

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 553, the NRC is proposing to adopt the following amendments to 10 CFR Parts 2, 20, and 50.

PART 2 - RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS AND ISSUANCE OF ORDERS

1. The authority citation for Part 2 continues to read as follows:

AUTHORITY: Secs.161, 181, 68 Stat. 948, 953, as amended (42 U.S.C. 2201, 2231); sec. 191, as amended, Pub. L. 87-615, 76 Stat. 409 (42 U.S.C. 2241); sec. 201, 88 Stat.1242, as amended (42 U.S.C. 5841); 5 U.S.C. 552.

Section 2.101 also issued under secs. 53, 62, 63, 81, 103, 104, 105, 68 Stat. 930, 932, 933, 935, 936, 937, 938, as amended (42 U.S.C. 2073, 2092, 2093, 2111, 2133, 2134, 2135); sec. 114(f), Pub. L. 97-425, 96 Stat. 2213, as amended (42 U.S.C. 10143(f)); sec. 102, Pub. L. 91-190, 83 Stat. 853, as amended (42 U.S.C. 4332); sec. 301, 88 Stat. 1248 (42 U.S.C. 5871).

Sections 2.102, 2.103, 2.104, 2.105, 2.721 also issued under secs. 102, 103, 104, 105, 183i, 189, 68 Stat. 936, 937, 938, 954, 955, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2233, 2239). Section 2.105 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239).

Sections 2.200-2.206 also issued under secs. 161 b, i, o, 182, 186, 234, 68 Stat. 948-951, 955, 83 Stat. 444, as amended (42 U.S.C. 2201 (b), (i), (o), 2236, 2282); sec. 206, 88 Stat 1246 (42 U.S.C. 5846). Section 2.205(j) also issued under Pub. L. 101-410, 104 Stat. 90, as amended by section 3100(s), Pub. L. 104-134, 110 Stat. 1321-373 (28 U.S.C. 2461 note). Sections 2.600-2.606 also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853, as amended (42 U.S.C. 4332).

Sections 2.700a, 2.719 also issued under 5 U.S.C. 554. Sections 2.754, 2.760, 2.770, 2.780 also issued under 5 U.S.C. 557. Section 2.764 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 2.790 also issued under sec. 103, 68 Stat. 936, as amended (42 U.S.C. 2133), and 5 U.S.C. 552. Sections 2.800 and 2.808 also issued under 5 U.S.C. 553. Section 2.809 also issued under 5 U.S.C. 553, and sec. 29, Pub. L. 85-256, 71 Stat. 579, as amended (42 U.S.C. 2039). Subpart K also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Subpart L also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239). Subpart M also issued under sec. 184 (42 U.S.C. 2234) and sec. 189, 68 stat. 955 (42 U.S.C. 2239). Appendix A also issued under sec. 6, Pub. L. 91-560, 84 Stat. 1473 (42 U.S.C. 2135).

2. In § 2.1201, paragraph (a)(4) is added to read as follows:

§ 2.1201 Scope of subpart.

(a) * * *

(4) The amendment of a Part 50 license to release part of a power reactor facility or site for unrestricted use in accordance with § 50.83. Subpart L hearings for the partial site release plan, if conducted, must be complete before the property is released for use.

* * * * *

PART 20 - STANDARDS FOR PROTECTION AGAINST RADIATION

3. The authority citation for Part 20 continues to read as follows:

AUTHORITY: Secs. 53, 63, 65, 81, 103, 104, 161, 182, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 953, 955, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201, 2232, 2236, 2297f), secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

4. In § 20.1401, paragraphs (a) and (c) are revised to read as follows:

§ 20.1401 General provisions and scope.

(a) The criteria in this subpart apply to the decommissioning of facilities licensed under Parts 30, 40, 50, 60, 61, 70, and 72 of this chapter, and release of part of a facility or site for unrestricted use in accordance with § 50.83 of this chapter, as well as other facilities subject to the Commission's jurisdiction under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended. For high-level and low-level waste disposal facilities (10 CFR Parts 60 and 61), the criteria apply only to ancillary surface facilities that

support radioactive waste disposal activities. The criteria do not apply to uranium and thorium recovery facilities already subject to Appendix A to 10 CFR Part 40 or to uranium solution extraction facilities.

* * * * *

(c) After a site has been decommissioned and the license terminated in accordance with the criteria in this subpart, or after part of a facility or site has been released for unrestricted use in accordance with § 50.83 of this chapter and in accordance with the criteria in this subpart, the Commission will require additional cleanup only if based on new information, it determines that the criteria of this subpart were not met and residual radioactivity remaining at the site could result in significant threat to public health and safety.

* * * * *

PART 50 - DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

5. The authority citation for Part 50 continues to read as follows:

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

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

6. Section 50.2 is revised by adding “Historical site assessment,” “Impacted areas,” and “Non-impacted areas” in alphabetical order to read as follows:

§ 50.2 Definitions.

* * * * *

Historical site assessment means the identification of potential, likely, or known sources of radioactive material and radioactive contamination based on existing or derived information for the purpose of classifying a facility or site, or parts thereof, as impacted or non-impacted.

Impacted areas mean the areas with some potential for residual radioactivity in excess of natural background or fallout levels.

* * * * *

Non-impacted areas mean the areas with no reasonable potential for residual radioactivity in excess of natural background or fallout levels.

* * * * *

7. In § 50.8, paragraph (b) is revised to read as follows:

§ 50.8 Information collection requirements: OMB approval

* * * * *

(b) The approved information collection requirements contained in this part appear in §§50.30, 50.33, 50.33a, 50.34, 50.34a, 50.35, 50.36, 50.36a, 50.36b, 50.44, 50.46, 50.47, 50.48, 50.49, 50.54, 50.55, 50.55a, 50.59, 50.60, 50.61, 50.62, 50.63, 50.64, 50.65, 50.66, 50.68, 50.71, 50.72, 50.74, 50.75, 50.80, 50.82, 50.83, 50.90, 50.91, 50.120, and Appendices A, B, E, G, H, I, J, K, M, N, O, Q, R, and S to this part.

* * * * *

8. In § 50.75, paragraph (g)(4) is added to read as follows:

§ 50.75 Reporting and record keeping for decommissioning planning.

* * * * *

(g) * * *

(4) Within 1 year of the effective date of this regulation, the licensee shall maintain property records containing the following information:

- (i) Records of the site boundary, as originally licensed, which must include a site map;
- (ii) Records of any acquisition or use of property outside the originally licensed site boundary for the purpose of receiving, possessing, or using licensed materials;
- (iii) The licensed activities carried out on the acquired or used property; and
- (iv) Records of the disposition of any property recorded in paragraphs (g)(4)(i) or (g)(4)(ii) of this section, the historical site assessment performed for the disposition, radiation surveys performed to support release of the property, submittals to the NRC made in accordance with § 50.83, and the methods employed to ensure that the property met the radiological criteria of 10 CFR Part 20, Subpart E, at the time the property was released.

9. In § 50.82, paragraph (a)(9)(ii)(H) is added and paragraph (a)(11)(ii) is revised to read as follows:

§ 50.82 Termination of license.

* * * * *

(a) * * *

(9) * * *

(ii) * * *

(H) Identification of parts, if any, of the facility or site that were released for use before approval of the license termination plan.

* * * * *

(11) * * *

(ii) The final radiation survey and associated documentation demonstrate that the facility and site, including any parts released for use before approval of the license termination plan, are suitable for release in accordance with the criteria for decommissioning in 10 CFR Part 20, Subpart E.

* * * * *

10. A new § 50.83 is added to read as follows:

§ 50.83 Release of part of a power reactor facility or site for unrestricted use.

(a) NRC approval is required to release part of a facility or site for unrestricted use at any time before receiving approval of a license termination plan. Nuclear power reactor licensees seeking NRC approval shall - -

(1) Evaluate the effect of releasing the property to ensure that - -

(i) The dose to individual members of the public from the portion of the facility or site remaining under the license does not exceed the limits of 10 CFR Part 20, Subpart D;

(ii) There is no reduction in the effectiveness of emergency planning or physical security;

(iii) Effluent releases remain within license conditions;

(iv) The environmental monitoring program and offsite dose calculation manual are revised to account for the changes;

(v) The siting criteria of 10 CFR Part 100 continue to be met; and

(vi) All other applicable regulatory requirements continue to be met.

(2) Perform a historical site assessment of the part of the facility or site to be released;

and

(3) Perform surveys adequate to demonstrate compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402 for impacted areas.

(b) For non-impacted areas, the licensee may submit a written request for NRC approval of the release if a license amendment is not otherwise required. The request submittal must include - -

(1) The results of the evaluations performed in accordance with § 50.59 and paragraphs (a)(1) and (a)(2) of this section;

(2) A description of the part of the facility or site to be released;

(3) The schedule for release of the property; and

(4) A discussion that provides the reasons for concluding that the environmental impacts associated with the licensee's proposed release of the property will be bounded by appropriate previously issued environmental impact statements.

(c) After receiving an approval request from the licensee for the release of a non-impacted area, the NRC shall - -

(1) Determine whether the licensee's proposed release of the property meets all other applicable regulatory requirements;

(2) Determine whether the licensee's historical site assessment is adequate; and

(3) Upon determining that the licensee's submittal is adequate, inform the licensee in writing that the release is approved.

(d) For impacted areas, the licensee shall submit an application for amendment of its license for the release of the property. The application must include - -

(1) The information specified in paragraphs (b)(1) through (3) of this section;

(2) The methods used for and results obtained from the radiation surveys required to demonstrate compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402; and

(3) A supplement to the environmental report, pursuant to § 51.53, describing any new information or significant environmental change associated with the licensee's proposed release of the property.

(e) After receiving a license amendment application from the licensee for the release of an impacted area, the NRC shall - -

(1) Determine whether the licensee's proposed release of the property meets all other applicable regulatory requirements;

(2) Determine whether the licensee's historical site assessment is adequate;

(3) Determine whether the licensee's radiation survey for an impacted area is adequate; and

(4) Upon determining that the licensee's submittal is adequate, approve the licensee's amendment application.

(f) The NRC shall notice receipt of the release approval request or license amendment application and make the approval request or license amendment application available for public comment. Before acting on an approval request or license amendment application submitted in accordance with this section, the NRC shall conduct a public meeting in the vicinity of the licensee's facility for the purpose of obtaining public comments on the proposed release of a part of the facility or site. The NRC shall publish a document in the *Federal Register* and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, announcing the date, time, and location of the meeting, along with a brief description of the purpose of the meeting.

Dated at Rockville, Maryland, this ___ day of _____, 2001.

For the Nuclear Regulatory Commission.

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

ATTACHMENT 2

Regulatory Analysis

REGULATORY ANALYSIS

PROPOSED RULE – 10 CFR 50.83

Release of Part of a Facility or Site for Unrestricted Use

I. STATEMENT OF THE PROBLEM

The decommissioning and license termination rules of 10 CFR Parts 20 and 50 contain requirements to ensure that reactor facility decommissioning will be accomplished without undue impact on the public health and safety and the environment. The impact would arise from radioactivity remaining in structures, materials, soils, groundwater, and other media at a reactor site after the reactor license is terminated. Subpart E of 10 CFR Part 20 contains the radiological criteria for release of the reactor site following decommissioning. Under current regulations, a reactor licensee may sell part of its site before it has applied the radiological criteria for license termination to the property (i.e., before it submits its license termination plan, or LTP). This type of transfer of property from an NRC licensee is termed a “partial site release.” Current regulations do not require NRC approval if the release does not involve the transfer of licensed material. Existing regulations force the NRC to consider changes to the site boundary of a reactor site on a case-by-case basis to ensure adequate protection of the public and the environment.

Several reactor licensees have expressed interest in selling parts of their sites before they receive approval of their LTPs. The NRC believes the issues should be resolved generically. The proposed rulemaking is intended to provide a regulatory framework to address the situations and to help ensure that they are considered consistently and efficiently.

Background

In its review of the proposed sale of property that is part of the Oyster Creek plant site, the staff concluded that there was a gap in the regulations with respect to the partial release of power reactor sites or facilities. The staff is encountering similar issues in recent discussions with the Haddam Neck and Maine Yankee licensees, two power reactors undergoing decommissioning.

The license termination criteria of 10 CFR 50.82 and 10 CFR Part 20, Subpart E, do not require a reactor licensee to demonstrate compliance with the radiological criteria for unrestricted use when proposing a partial site release. Nor do the rules require a licensee to submit information necessary for the staff to evaluate the adequacy of a licensee’s partial site release. Concerns have been raised that without the proposed rule, a licensee could adopt a piecemeal approach to reduce the size of its site and avoid applying the criteria in the license termination rule when the licensee eventually requests termination of its 10 CFR Part 50 license.

To address the regulatory gap in 10 CFR Parts 20 and 50, the staff believes that rulemaking is needed to accomplish the following:

- (1) Standardize the process for allowing a licensee to release part of its reactor facility or site for unrestricted use before receiving approval of its LTP,

- (2) Ensure that residual radioactivity remaining from licensed activity in areas released for unrestricted use will meet the radiological criteria for license termination,
- (3) Maintain public confidence, and
- (4) Make efficient use of NRC and licensee resources.

The proposed rule would add a new section to 10 CFR Part 50, separate from the current decommissioning and license termination rules, that identifies the criteria and regulatory framework that a licensee would use to request NRC approval of a partial site release. It is narrowly focused on operating and decommissioning power reactors. Furthermore, the proposed rule does not provide for partial site release under restricted conditions.

In order for the staff to evaluate the adequacy of the licensee's plans for partial site release, the proposed rule will require licensees to submit information necessary to demonstrate the following:

- The released property satisfies the radiological criteria for unrestricted use in 10 CFR Part 20, Subpart E, Section 1402 (0.25 mSv/yr [25 mrem/yr] to the average member of the critical group and as low as reasonably achievable).
- The licensee will continue to comply with all other applicable regulatory requirements that may be impacted by the release of property and changes to the site boundary. This would include, for example, regulations in 10 CFR Parts 20, 50, 72, and 100.
- Records of property line changes and the radiological conditions of partial site releases are being maintained to ensure that the dose from residual material associated with these releases can be accounted for at the time of any subsequent partial releases and at the time of license termination.

The approval process by which the property would be released depends on the radiological classification of the area to be released, as defined using the MARSSIM (Multi-agency Radiation Survey and Site Investigation Manual) protocol (Reference 1). For proposed release areas classified as *non-impacted* and, therefore, having no reasonable potential for contamination and whose release would not adversely affect reactor safety, the staff would approve the release by letter. For areas classified as impacted and, therefore, having some potential for contamination, the proposed rule specifies that a license amendment request be submitted for NRC review. The amendment request would include the licensee's plan to demonstrate compliance with the radiological criteria for unrestricted use specified in 10 CFR Part 20, Subpart E. Regulatory guidance for performing this demonstration is contained in NUREG-1727 (Reference 2).

Existing Regulatory Framework

The decommissioning and license termination rules of 10 CFR Parts 20 and 50 contain requirements to ensure that reactor facility decommissioning will be conducted without undue impact on public health and safety and the environment. Section 50.82, "Termination of license," provides the requirements for decommissioning and license termination of power reactor

facilities and references Subpart E of 10 CFR Part 20. Section 20.1402 contains the criteria for unrestricted release.

The staff determines that the licensee has met the license termination criteria using information submitted by the licensee in its LTP and final radiation survey. The LTP is not required until 2 years before the anticipated date of license termination. The final radiation survey is not required until after the licensee completes its decontamination activities. These requirements were based on the NRC's anticipation that reactor licensees would permanently cease operations and then perform the decommissioning and license termination of the site as one large project.

Under the current case-by-case approach applied to partial site release proposals, the regulations do not clearly state what radiological criteria apply. The staff's recent response to the proposed sale of parts of Oyster Creek's site stipulated that a number of actions be taken to ensure that the property sold would meet the radiological release criteria of 10 CFR Part 20. The proposed rule would help to standardize the process for allowing a licensee to release part of its reactor facility or site for unrestricted use on the basis of the criteria used for license termination.

A number of other regulations pertain to the definition of reactor sites and to their expected use during the life of the licensed facility. Definitions and requirements for power reactor sites are contained in Part 100. Section 100.10, "Factors to be considered when evaluating sites," lists considerations used in determining the acceptability of sites, including the expected uses of the site environs and the exclusion area. Section 100.3 defines exclusion area as that area surrounding the reactor in which the reactor licensee has the authority to determine all activities, including exclusion or removal of personnel and property from the area. Section 20.1003 defines the site boundary as that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee. Paragraph (b)(1) of Section 50.34, "Contents of applications; technical information," requires the final safety analysis report to include all current information on site evaluation factors identified in Part 100, such as those in Section 100.10.

NRC Regulatory Issue Summary (RIS) 2000-19 (October 24, 2000) provides licensees with the NRC's plans for handling partial site release approval requests during the rulemaking. The RIS guidance informs licensees that are considering partial site release of the information needed by the NRC in order to facilitate NRC evaluation of the proposed action.

II. OBJECTIVE OF THE PROPOSED RULE

The objective of this rulemaking is to standardize the process for allowing a licensee to release part of its reactor facility or site for unrestricted use before receiving approval of its LTP. The proposed rule would ensure that parts of a reactor site released for unrestricted use meet the radiological criteria for license termination, even if parts of the site are released before a licensee submits its LTP. The rule is intended to make clear that the radiological criteria of 10 CFR Part 20, Subpart E (0.25 mSv/yr [25 mrem/yr] to the average member of the critical group and as low as reasonably achievable), applies to a partial site release.

The proposed rule will require licensees to submit information necessary to demonstrate that the proposed release is in compliance with the radiological criteria for unrestricted use. This issue was extensively considered in the rulemaking establishing the radiological criteria for license

termination (Reference 3). The Commission is proposing this rule to ensure that the level of protection to individuals from radiological exposure for a partial site release is the same as for termination of a power reactor facility license.

The proposed rule is applicable only to Part 50 licensees of operating and decommissioning nuclear power reactors. It addresses two situations, depending on the amount of residual radioactivity present in the area proposed for release. First, for areas classified as impacted, and, therefore, having some potential for contamination, the licensee would submit a license amendment request with the licensee's plan to demonstrate compliance with the radiological criteria for unrestricted use specified in 10 CFR Part 20, Subpart E, Section 1402. Second, for proposed release areas classified as *non-impacted* and, therefore, having no reasonable potential for contamination, there is no public dose attributable to the property and NRC can approve the action by letter upon determining that the licensee has met the criteria of the proposed rule.

In contrast to the license termination process, the proposed rule would not require a license amendment in all cases to release property for unrestricted use. The staff believes this difference is justified for two reasons. First, the license termination process was created to treat the facility or site as a whole, which inevitably involves considering residual radioactivity above background levels, such as that found in plant systems. The proposed rule preserves the license amendment approach for cases in which the area to be released is radiologically impacted and requires that the dose meet the radiological criteria for unrestricted use. Second, for cases in which the change does not adversely affect reactor safety and the area is demonstrated to not be radiologically impacted, the level of NRC review for a license amendment is not required. The review of the proposed release would essentially be an inspection/enforcement review to determine if it would meet release criteria.

In some cases, license conditions or technical specifications in a reactor license may define the site boundary in detail, or include a site map. In these cases, a reactor licensee would submit a license amendment application for a partial site release, regardless of the amount of residual radioactivity in the area to be released, because the site boundary would change. However, under current regulations, a licensee could amend its license to remove the definition of the site boundary without mentioning a partial site release and then proceed to partially release the site without obtaining NRC approval. The proposed rule would require NRC approval for a partial site release regardless of the amount of detail in the site description in the operating license.

If license conditions or technical specifications for a Part 50 or 72 license require the site boundary to follow a particular line or to have certain dimensions, the technical issues must be resolved before the license can be amended. The proposed rule does not relieve a licensee from this requirement.

The proposed rule provides for public participation. The NRC will notice receipt of a licensee's proposal for a partial release, regardless of the amount of residual radioactivity involved, and make the proposal available for public comment. The NRC will also hold a public meeting in the vicinity of the site to discuss the licensee's letter of intent or license amendment request, as applicable. The proposed rule will amend 10 CFR Part 2 to provide the opportunity for an informal hearing if a license amendment involving a partial site release is challenged.

The proposed rule would apply only when a reactor licensee intends to partially release a site before receiving approval of its LTP. As part of its LTP, a licensee may propose releasing its site in stages. The staff will evaluate the licensee's plan and if it is adequate, approve it by approving the license amendment for the LTP. Once the LTP is approved, a separate regulatory mechanism is no longer needed for partial site releases.

The proposed rule would not allow a partial site release under restricted conditions. Restricted conditions are conditions in which the criteria for unrestricted release are not met. Current regulations require a licensee to submit its LTP before it can use the radiological criteria for license termination under restricted conditions. The staff does not propose to change that requirement, nor has any reactor licensee expressed interest in releasing property for restricted use.

III. ALTERNATIVES

The staff considered three alternatives for this proposed rule.

OPTION 1: No rulemaking – Address proposals to release a part of a power reactor facility or site on a case-by-case basis.

Advantage: No resources spent on rulemaking.

Disadvantages:

- The lack of regulations specifically applying the radiological criteria for unrestricted use to a partial site release could result in a dose to the public in excess of the limits specified in 10 CFR Part 20, Subpart E.
- The lack of regulations providing a standardized process for requesting approval of a partial site release could result in the application of inconsistent or unnecessary standards to licensees and unnecessary expenditure of industry and NRC resources in determining appropriate standards and processes for each case.
- The lack of regulations providing a standardized process for requesting approval for a partial site release might allow a licensee to take actions that adversely affect the ultimate decommissioning of the site or to adopt a piecemeal approach to reducing the size of its site in order to avoid applying the license termination criteria.

OPTION 2: Proceed with a narrowly focused rulemaking to revise 10 CFR Parts 2, 20, and 50 to address partial releases of power reactor sites.

Advantages:

- Provides clear regulation of partial releases for operating and permanently shutdown power reactor plants.
- Ensures that the ultimate decommissioning of the site will not be adversely affected and that the radiological consequences of a partial site release do not present an undue risk to public health and safety.

- Allows greater licensee and NRC efficiency in processing a partial site release.
- Allows guidance developed for decommissioning and license termination to be used for partial site releases.
- Provides for public participation in the regulatory process for partial site releases.

Disadvantages:

- Resources spent on rulemaking.
- Additional reporting and record keeping required of licensees.

OPTION 3: Conduct a broadscope rulemaking to revise 10 CFR Parts 2, 20, 30, 40, 50, 70, and 72 to address partial site releases at a variety of facility types.

Advantages:

- Same as Option 2 for power reactor licensees.
- For all classes of licensees, provides greater consistency for partial releases.
- May improve overall efficiency by addressing partial releases of all types of facilities in a single, large effort.

Disadvantages:

- Short-term resource expenditures to expand the scope of rulemaking would be significant because of the larger number and diversity of stakeholders.
- The different schedules and operating environments for decommissioning materials and research reactor facilities would result in some differences in the requirements for partial site releases in any case.
- The approval of power reactor licensee partial release proposals could be delayed because of the time needed to address the greater complexity of including research reactor and Parts 30, 40, 70, and 72 licensees in the rulemaking.

Option 1, the no-action alternative, is not a preferred option because it would not address the concern that continued regulation of partial site release on a case-by-case basis would be inconsistent and inefficient. The lack of a standardized process for partial site release could jeopardize the effectiveness of the ultimate decommissioning of a facility if the radiological

standards of 10 CFR Part 20 were not properly applied. The current situation could also allow licensees to pursue partial site releases that circumvent the intent of the license termination rule by using a piecemeal approach to clearing property for unrestricted use. These safety considerations were an important factor in the NRC's determination that this option was not acceptable.

Option 3, a broad rulemaking addressing partial site releases at a variety of facility types, is not a preferred option because it is not expected to provide the timely rulemaking necessary to address several near-term proposed partial releases of power reactor sites. Partial site releases for materials licensees are addressed to a limited extent in other regulations (i.e., Parts 30, 40, 70, and 72). The proposed rule will change the requirements for power reactor sites but will not affect licensees of materials or research reactor sites. In the future, the staff may consider changes to the regulations for materials licensees to make the requirements consistent with the proposed rule for reactor licensees.

The following evaluation considers the values and impacts of Option 2 relative to the current situation, or Option 1.

IV. EVALUATION OF VALUES AND IMPACTS

This section evaluates values (benefits) and impacts (costs) associated with rulemaking Option 2 in comparison with the no-action alternative. The staff analysis quantifies a number of factors, but some were considered mostly on qualitative grounds.

The costs and benefits associated with decommissioning were analyzed in detail in the Generic Environmental Impact Statement (GEIS) (Reference 3) and the regulatory analysis accompanying the 1997 final rule on radiological criteria for license termination (Reference 4). The proposed rule for partial site release uses the existing radiological criteria for license termination, and partial site releases are expected to involve many of the same licensee activities that would be conducted during decommissioning and license termination. Therefore, the staff used information from past analyses in References 3 and 4 for this analysis. The costs of surveys and remediation for a specific partial site release are expected to typically be less than for these activities during decommissioning and license termination of a reactor facility. Accordingly, the staff used its judgment in applying site-wide costs to represent a typical partial site release. The site-specific nature of factors involved in partial site releases makes it difficult to arrive at a generically applicable analysis of the costs involved. Although the staff intended to represent a typical case, an analysis for a particular site may differ from the staff's estimates.

In conducting this evaluation, the staff followed NRC guidelines for conducting regulatory analyses (References 5 and 6), using the prescribed 7-percent annual rate to adjust 1988 dollar values to 2001 dollar values. The staff also performed a sensitivity analysis using a 3-percent annual rate to determine if the results would be significantly affected. Uncertainty in the estimates arises from the NRC's relative inexperience in reviewing partial site release requests and from the large number of factors that could increase or reduce the costs at a particular site relative to the typical case. Therefore, the estimates given here should be regarded as scoping values rather than precise limits in the range of actual partial site release costs for a site.

The proposed rule includes new requirements, such as a public meeting and submittal of a request for NRC review and approval. The staff estimated the costs of the new requirements to the NRC and the industry. The benefits to licensees could vary significantly, depending on the value of the real estate involved, local taxes, the costs of maintaining the property, and so on. The staff did not attempt to estimate licensee benefits. Benefits to the public, in the form of adverse health effects averted under the proposed rule, were difficult to estimate based on previous analyses in the GEIS (Reference 4), as described later.

The staff analysis quantifies costs of (1) licensee preparation and NRC review of the request for partial site release, (2) holding the public meeting, (3) surveys and remediation activity to support release under the license termination rule criteria, and (4) record keeping by the licensee. Benefits considered in the analysis are limited to estimated health consequences associated with executing partial release using license termination criteria. However, the wide variation in the estimate of health benefits from the analysis in Reference 4 precluded a direct comparison of costs to benefits.

Preparation and Review of a Licensee's Request

The proposed rule would require that a licensee pursuing partial site release submit either a letter requesting approval to release a portion of its site or a license amendment requesting approval of the action, depending on whether the site is radiologically impacted. In either case, the licensee would provide certain information that the NRC would use in evaluating the proposed release. This information includes the following:

- a. the results of a safety evaluation of the release of the part of the existing licensed facility,
- b. the basis for determining that the radiological criteria for release are satisfied,
- c. a description of the area or facility under consideration, and
- d. a supplement to the environmental report describing any significant new environmental effects associated with the proposed property release.

The NRC will use this information to determine whether the proposed release meets regulatory requirements.

In these respects, the proposed rule differs little from a case-by-case consideration of proposed releases because it is expected that the licensee and NRC would engage in nearly the same activities to ensure that 10 CFR Part 20 release criteria are satisfied for unrestricted release. This was the case with the Oyster Creek licensee's recent proposal (discussed earlier). However, because the submittal is a regulatory requirement under the proposed rule, the staff sought to estimate its impact.

Under the proposed rule, NRC review of a partial site release is necessary whether or not the licensee submitted a letter or a license amendment. It is reasonable to expect that it will take less effort for a licensee to prepare and the NRC to review a letter proposing the release of an area that is not radiologically impacted than a license amendment to release an area that is radiologically impacted. Therefore, the staff estimated costs of both cases.

The staff used approximate values for licensee and NRC costs from NUREG/CR-4627 (Reference 7), which estimates costs for "typical" and "complicated" technical specification changes. The staff assumed that the release of contaminated or potentially contaminated areas

would require documented surveys. Such releases would incur costs equivalent to a “complicated” amendment. A release of property not requiring the same level of effort and not involving a license amendment was assessed as the “typical” license amendment case in Reference 7. Using these assumptions, and adjusting the 1988 NUREG/CR-4627 estimates upward to reflect 7-percent annual inflation, the staff estimated that the licensee’s cost of preparing a partial release request would range from \$43,000 to \$84,000, depending upon whether it deals with an impacted area (or \$37,000 to \$72,000, assuming a 3-percent annual inflation rate).

NRC licensing action costs are based on dollar values, rather than on staff full-time-equivalent positions, using values given in Reference 7. Again, adjusted to 2001 dollars, the NRC review cost would range from \$27,000 to \$51,000, depending upon whether it deals with an impacted area (or \$24,000 to \$44,000, assuming a 3-percent annual inflation rate).

The staff compared this estimated range to the NRC resources actually used to review the proposed partial site release at Oyster Creek. The staff review totaled 447 hours, or about \$33,000 at a rate of \$75 per staff hour. The inspection effort was estimated to be approximately 0.5 full-time staff equivalent, or about \$55,000 (at \$75 per staff-hour). The total NRC effort to review the Oyster creek proposal was greater than the estimate based on the Reference 7 analysis. This result is not unexpected because the Oyster Creek action was unique, and the costs would be expected to decrease as the NRC staff gained experience in similar reviews. Therefore, the staff considers the estimate reasonable for the typical case after the first few reviews are completed.

Public Meeting

The proposed rule requires that a public meeting be held before the release is approved to serve as a forum for public comments on the proposed release. The staff estimated the NRC and licensee costs associated with the meeting on the basis of recent experience involving public meetings for license termination and decommissioning. The meetings envisioned under the proposed rule are expected to involve the same preparation and costs as the past meetings.

The staff estimated that the combined preparation, travel, and followup activities would consume approximately \$15,000 of NRC resources and would cost a licensee about \$22,000 (the difference exists because a higher labor rate is used for licensee staff effort than for NRC staff).

Licensee Partial Site Release Activities

A licensee proposing release of a portion of its site must conduct certain activities to demonstrate that the area under consideration meets the radiological release criteria for unrestricted release. The activities include radiological characterization surveys, remediation of site media (such as soil), and final surveys. The costs of these activities were estimated in detail for the analyses in Reference 4. The staff judged that the results of the analyses assuming site decommissioning for license termination were applicable to partial site release because the basic activities would be the same.

In Reference 4, the staff estimated the costs of soil remediation and site surveys for an entire site to be in the range of \$200,000 in 1997 dollars. Mobilizing a survey and remediation effort for a potentially contaminated portion of a reactor site would involve almost the same level of effort, and the expenses probably would be in the same range as that estimate. Assuming a 7-percent annual rate of inflation adjusts this value to about \$260,000 in 2001 dollars (the 3-percent value is \$225,000). The staff assumed that remediation would be involved in the typical partial site release case. However, the staff expects that partial site releases of non-impacted areas will involve fewer, if any, surveys and little remediation, and the expense for licensees would be less than this estimate.

Record keeping

The proposed rule would require licensees to maintain records of their sites as originally licensed. Licensees would also track changes to site boundaries and preserve information about the radiological conditions of any partial site releases. Upon decommissioning for license termination, these records would provide information to help ensure licensee compliance with the release criteria of the license termination rule.

The requirements that licensees maintain records of property line changes and of the radiological conditions of partially released sites ensure that these conditions can be adequately considered at the time of any subsequent partial releases and at the time of license termination. The entire site, as defined in the original license and subsequent modifications to the site boundary, is to be included in the LTP to ensure that the entire area meets the radiological release requirements 10 CFR Part 20, Subpart E, at the time the license is terminated. These proposed requirements are intended to ensure that the level of protection from radiological exposure for a partial site release is the same as for license termination of a power reactor facility.

The record keeping requirement of the proposed rule is not new. Under Section 50.75, "Reporting and record keeping for decommissioning planning," licensees are required to "keep records of information important to the safe and effective decommissioning of the facility ... until the license is terminated by the Commission." The regulation states that records of occurrences involving the spread of contamination in and around the site should be retained. This information is necessary to classify the site in preparation for decommissioning activities. The Statement of Considerations for the proposed rule on decommissioning criteria for nuclear facilities (Reference 8) further emphasized the need for information on the facility site so that decommissioning can be effectively accomplished. The NRC has determined that to ensure effective decommissioning under Section 50.75, the proposed rule on partial site release should require that licensees retain records of parts of their site that are released for unrestricted use before the NRC approves the LTP. This information will provide the basis for ensuring that the entire originally licensed site and subsequent additions to and subtractions from the site have been properly cleared for the appropriate level of release upon termination of the license by the NRC.

The proposed record keeping requirements are expected to increase existing record keeping requirements only slightly. The retention of records is considered a good practice, and because the records will be generated in any case before the license is terminated, their retention is not considered an undue burden.

Health, Safety, and Environmental Effects

A primary objective of the rule is to ensure that any property released before approval of the LTP meets the unrestricted release criteria in 10 CFR Part 20, Subpart E. The rulemaking for the final rule on radiological criteria for license termination (Reference 3) included the Part 20 requirements and considered the risk to the public health and safety in detail. The Generic Environmental Impact Statement (GEIS, Reference 4) for the 1997 final rule provided the assumptions used and results of the value-impact analysis. The GEIS showed that the cost-benefit for soil cleanup at a power reactor could vary over a wide range, depending upon factors that are largely plant-specific. The results for remediation to the 0.25 mSv/yr [25 mrem/yr] criterion range from a very high cost per death averted to a negative health effect. Because of these results, the staff did not rely on quantification of health effects for the license termination rule and used other reasoning to justify the choice of the 0.25 mSv/yr [25 mrem/yr] criterion.

The reasoning that the staff used was documented in References 3 and 4. The justification hinged on the consensus from independent studies that the limit for public dose should be 1.0 mSv/yr [100 mrem/yr] from all manmade sources. With this in mind, any single source should then be some fraction of 1.0 mSv/yr [100 mrem/yr]. The staff concluded that the 0.25 mSv/yr [25 mrem/yr] criterion for site release for license termination would preclude an individual's dose from exceeding 1.0 mSv/yr [100 mrem/yr] from a number of separate sources.

In light of the staff's difficulties encountered in quantifying the health benefits associated with the license termination clearance criteria, the staff has not attempted to further refine that analysis for this proposed rule. The staff accepts the safety conclusions set forth in the license termination rule. By using the same radiological criterion, the staff does not anticipate that the proposed rule will have any unforeseen adverse effect on public health and safety.

Comparison of Alternatives

In this analysis, the staff has compared only Option 2, the proposed rule, to the current situation. The following table summarizes the NRC and licensee costs considered in the preceding analysis.

Proposed Rule Estimated Costs¹ (Thousands in 2001 Dollars)

	7 Percent Inflation ²			3 Percent Inflation ²		
	NRC	Licensee	Total	NRC	Licensee	Total
Submittal Preparation/Review	27-51	43-84	70-135	24-44	37-72	61-116
Public Meeting	15	22	37	15	22	37
Surveys/Remediation	—	260	260	—	225	225
Record keeping	—	nil	nil	—	nil	nil
Totals	42-66	325-366	367-432	39-59	284-319	323-378

1 - Costs are per partial site release action.

2 - Inflation adjustment used only for cost data that were not already in 2001 dollars.

The first observation the staff made was that the sensitivity analysis using a 3-percent inflation rate did not appreciably change the results. Considering other uncertainties, such as plant-specific variables, the results from using the two values can be assumed to be roughly equivalent. The second observation is that licensees will incur significant costs only for those partial site release requests involving radiologically impacted areas that will require surveys and remediation. Licensees will need to determine if the one-time costs, such as those shown here, compare favorably to the potential benefit that could be gained, such as from sale of property that is released. However, the costs estimated in this analysis appear to be nominal compared to probable real estate values in the proximity of some facilities. The staff judged that the costs considered here would probably not be significant factors preventing licensees from pursuing partial site releases.

The staff estimated that the total licensee cost would range from \$325,000 to \$366,000 and that NRC costs could be as high as \$66,000. The staff expects that, on average, two licensees will request partial site releases each year. Therefore, the total annual costs for licensees and the NRC could be as high as \$732,000 and \$132,000, respectively.

These relatively modest costs are one-time expenditures associated with the release of a portion of a site. The staff does not consider the costs an undue burden on licensees nor an unacceptable regulatory burden to NRC. Therefore, the analysis supports Option 2 for the proposed rule. Option 3 was not considered a viable alternative because the rulemaking would take much longer, thereby delaying implementation of the proposed rule to address a regulatory gap that could seriously undermine the effectiveness and safety of eventual decommissioning at a site. The health and safety benefit was quantified for the final rule on radiological criteria for license termination but varied over such a wide range that it is not useful in this analysis, except to demonstrate that a favorable cost-benefit ratio could be achieved under the license termination release criteria. The proposed rule would provide a level of safety commensurate with that expected for releases of sites for unrestricted use under the license termination rule. The staff judged that because of the relatively modest impact on NRC and licensee resources, and the need to address the regulatory gap, the proposed rule should be implemented following Option 2.

Backfit Considerations

The NRC has determined that the backfit rule does not apply to this proposed rule; therefore, a backfit analysis is not required because it does not involve any provisions that would impose backfits as defined in 10 CFR 50.109(a)(1). The proposed rule would clarify the application of the license termination rule (LTR) for partial site release and the relationship between partial site release and decommissioning of a site under 10 CFR 50.82. A backfit analysis was not required for the LTR because it did not involve reactor operations and it was not required for 10 CFR 50.82 because that rule was imposed to ensure adequate protection of the public health and safety. Since backfit analyses were not required for either the LTR or for 10 CFR 50.82, it would not appear to be needed for this rulemaking action.

Additionally, the purpose of the LTR and 10 CFR 50.82 is to ensure that the residual radioactivity from the licensed activity is within the criteria of the LTR. The LTR requires that any previously approved onsite disposals be reconsidered in determining releases under the LTR. As to previously approved offsite releases, Section F.2.3 of the Statement of Considerations for the

final LTR describes a limited grandfathering for previously approved partial site releases. The NRC stated that guidance would be issued on how licensees should address previously released portions of licensed sites. Consequently, while a previously approved partial site release meeting the LTR criteria would not need to be reconsidered, absent new information in accordance with 10 CFR 20.1401(c), it was not the intent of the rule that interaction from the previously released residual radiation would not need to be considered in the release decision for the remaining portions of the site. To not read the LTR as requiring the radiation interactions from the previously released site to be considered in making release determinations on the remaining site would permit a licensee to release a site that would otherwise not meet the LTR criteria by releasing the site by segments, each one below the criteria of the LTR. Such an approach would defeat the intent of the LTR to consider all the residual radioactivity from the licensed activity in meeting the LTR criteria. This rulemaking would clarify the intent of the LTR and not establish new policies or standards.

Impacts on Other Programs and Other Agencies

The Environmental Protection Agency (EPA) and State governments will be the government entities most directly affected by the proposed rule. The interest of EPA and the States in partial site releases, like their current interest in decommissioning and license termination activities, will primarily concern the criteria used for declaring property cleared for unrestricted use. EPA and the States will probably participate in public meetings and coordinate with NRC in evaluating proposed partial site releases.

The NRC will seek clearance from the Office of Management and Budget for the record keeping requirements of the proposed rule.

The proposed rule may affect similar actions taken by non-reactor NRC licensees because the process established by this proposed rule may be instituted for other facilities seeking partial site releases.

V. DECISION RATIONALE

The regulatory analysis documented herein led the NRC to conclude that the proposed rule will impose moderate costs on the NRC and on licensees proposing to pursue partial site releases. The staff did not estimate the material benefits to licensees that obtain approval for partial site releases. The objective of the proposed rule is to help ensure the effectiveness of decommissioning and license termination efforts that would eventually follow partial site releases. Therefore, the staff judged that the proposed rule offers health and safety benefits commensurate with the benefits of existing license termination requirements for power reactors, while imposing only modest impacts on NRC and the industry. On this basis, the staff recommends rulemaking alternative Option 2.

VI. IMPLEMENTATION

The final rule will become effective 30 days after publication in the *Federal Register*. Implementation should not be difficult because the NRC, through RIS 2000-19, is now prepared to consider partial site releases in the manner set forth in the proposed rule.

VII. REFERENCES

1. "Multi-agency Radiation Survey and Site Investigation Manual (MARSSIM)," NUREG-1575, Revision 1, August 2000.
2. "NMSS Decommissioning Standard Review Plan," NUREG-1727, September 2000.
3. "Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities," NUREG-1496, Volume 1, July 1997.
4. "Radiological Criteria for License Termination," 62 FR 39058, July 21, 1997.
5. "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," NUREG/BR-0058, Revision 3, July 2000.
6. "Regulatory Analysis Technical Evaluation Handbook," NUREG/BR-0184, January 1997.
7. "Generic Cost Estimates," NUREG/CR-4627, Revision 2, February 1992.
8. "Decommissioning Criteria for Nuclear Facilities," 50 FR 5600, February 11, 1985.

ATTACHMENT 3

Environmental Assessment

ENVIRONMENTAL ASSESSMENT

PROPOSED RULE 10 CFR PART 50.83

Release of Part of a Facility or Site for Unrestricted Use

In accordance with 10 CFR Part 51 (Reference 1), this document presents the findings of NRC's environmental assessment of a proposed rule on the release of a part of a nuclear power reactor facility or site for unrestricted use. This type of release is termed a "partial site release." NRC proposes to add a new section to 10 CFR Part 50, separate from the existing decommissioning and license termination rules, that identifies the criteria and the regulatory framework to be used by licensees requesting approval of partial site releases. The proposed rulemaking includes associated amendments to 10 CFR Part 2 and 10 CFR Part 20.

NRC's regulations for implementing Section 102(2) of the National Environmental Policy Act of 1969 (NEPA), as amended, are contained in Subpart A of 10 CFR Part 51. These regulations require that an environmental impact statement or an environmental assessment be prepared for all licensing and regulatory actions that are not classified as "categorical exclusions" in accordance with 10 CFR 51.22(c) and are not identified in 10 CFR 51.22(d) as other actions not requiring environmental review.

Identification of the Action

Under current regulations, the holder of an operating license (i.e., the licensee) for a light-water power reactor is not required to seek or obtain NRC approval for a partial site release. The license termination criteria of 10 CFR 50.82 and 10 CFR Part 20, Subpart E, do not require a reactor licensee to demonstrate compliance with the radiological criteria for unrestricted use for a partial site release. Nor do the regulations require a licensee to submit information necessary for the staff to evaluate the adequacy of a licensee's partial site release. To address the regulatory gap in 10 CFR Parts 20 and 50, the staff believes that a rulemaking is needed to make it clear that the radiological criteria of 10 CFR Part 20, Subpart E, for unrestricted release (0.25 mSv/yr [25 mrem/yr] to the average member of the critical group and as low as reasonably achievable) apply to a partial site release. This rulemaking would ensure that any remaining residual radioactivity from licensed activities in parts of a site released for unrestricted use will meet the radiological criteria for license termination.

The proposed rule is narrowly focused on operating and decommissioning power reactors. Furthermore, the proposed rule does not allow partial site release under restricted conditions (as restricted release is permitted for license termination in 10 CFR 20.1403).

In order for the staff to evaluate the adequacy of the licensee's plans for partial site release, the proposed rule would require licensees to submit information necessary to demonstrate the following:

- The release complies with the radiological criteria for unrestricted use in 10 CFR 20.1402 (0.25 mSv/yr [25 mrem/yr] to the average member of the critical group and as low as reasonably achievable).

- They will continue to comply with all other applicable regulatory requirements that may be affected by the release of property and changes to the site boundary. This would include, for example, requirements in 10 CFR Parts 20, 50, 72, and 100.
- Records of property line changes and the radiological conditions of partial site releases are being maintained to ensure that the dose from residual material associated with these releases can be accounted for at the time of any subsequent partial releases and at the time of license termination.

The approval process for releasing property would depend on the potential for residual radioactivity from plant operations present in the area to be released. If the area is radiologically non-impacted and, therefore, having no reasonable potential for contamination, and if the release of the property would not adversely affect reactor safety, the staff would evaluate the proposed action and approve the release by letter. For areas classified as impacted and therefore, having some potential for contamination, the proposed rulemaking would require licensees to submit a license amendment for NRC approval. The amendment request would include the licensee's demonstration of compliance with the radiological criteria for unrestricted use specified in 10 CFR Part 20, Subpart E (0.25 mSv/yr [25 mrem/yr] to the average member of the critical group and as low as reasonably achievable). Regulatory guidance for performing this demonstration is contained in NUREG-1727, "NMSS Decommissioning Standard Review Plan" (Reference 2).

A Part 50 or Part 72 license may contain a license condition or a technical specification describing the site boundary in detail. Because a partial site release in this case would change the boundary of the site as licensed, a license amendment application for the proposed partial site release would be required regardless of the amount of residual radioactivity present in the area to be released.

Need for the Action

The objective of this rulemaking is to standardize the process for allowing a licensee to release part of its reactor facility or site for unrestricted use before receiving approval of its license termination plan (LTP). The proposed rule would ensure that residual radioactivity would meet the radiological criteria for license termination even if parts of the site are released before a licensee submits its LTP.

The staff has concluded that current regulations do not address the issue of partial site releases before NRC approval of a licensee's LTP. The gap in the existing regulations could conceivably allow a licensee to adopt a piecemeal approach to reduce the size of its site and avoid applying the license termination rule release criteria when the licensee requests termination of its 10 CFR Part 50 license. Because several reactor licensees have expressed interest in selling parts of their sites before they receive approval of their LTPs, the staff believes the issues should be resolved generically.

Environmental Impacts of the Action

The proposed rule would apply only to Part 50 licensees of operating and decommissioning nuclear power reactors. It addresses two situations, depending on the potential for residual radioactivity present in the area proposed for release. First, if an area is radiologically non-impacted and, therefore, having no reasonable potential for contamination, NRC would approve the release by letter upon determining that the licensee has met the criteria of the proposed rule. Second, if the area is classified as impacted and, therefore, having some potential for contamination, the licensee would submit a license amendment application. The license amendment application would include the licensee's demonstration of compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402.

The NRC prepared a "Generic Environmental Impact Statement (GEIS) in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities" (NUREG-1496, Reference 3), for 10 CFR Part 20, Subpart E. In that rulemaking, the Commission stated that the GEIS encompassed impacts expected to occur in most releases of a site for unrestricted use. The Commission concluded that the GEIS satisfied the obligations of NEPA for sites that meet the 0.25 mSv/yr [25 mrem/yr] criterion for unrestricted use. However, the Commission said it would still initiate an environmental assessment of any site for which a categorical exclusion did not apply to determine if the GEIS encompassed the range of environmental impacts expected at the site.

Under the proposed rule, licensees requesting a partial site release are expected to address the environmental consequences of the proposed release of parts of their property. No environmental consequences would be expected for the release of areas in which there is no contamination. The proposed rule would specifically require that licensees address the impact of the planned action on effluent releases, the site environmental monitoring program, and the offsite dose calculation manual. NRC verification of these steps will be conducted via detailed technical review of licensee-submitted information and onsite NRC inspections, including confirmatory radiation surveys as warranted. In those instances involving license amendments, licensees would also be required to provide a supplement to the existing environmental report to address the planned release. This requirement is similar to that of 10 CFR 50.82 (a)9(ii)G, the license termination rule.

The changes proposed by the rulemaking would not increase the probability or consequences of accidents, would not involve a significant increase in the amounts nor a significant change in the types of any effluents that may be released off site, and would not significantly increase occupational or public radiation exposures. Therefore, no significant radiological environmental impacts are associated with the changes. The proposed changes do not involve non-radiological plant effluents and have no other environmental impact. Therefore, no significant non-radiological environmental impacts are associated with the proposed rulemaking.

Alternatives to the Action

As required by Section 102(2)(E) of the NEPA (42 U.S.C.A. 4332(2)(E)), the NRC has considered possible alternatives to the proposed action. The staff considered the following alternatives to the proposed rulemaking:

Alternative 1: No action. If the NRC followed this alternative, rulemaking would not be pursued and the current situation would be maintained. The NRC would address proposals to release a part of a power reactor facility or site on a case-by-case basis. Under this alternative, NRC would evaluate each partial site release using the guidance in NRC Regulatory Issue Summary (RIS) 2000-19, "Partial Release of Reactor Site for Unrestricted Use Before NRC Approval of the License Termination Plan" (Reference 4). The RIS guidance parallels the proposed rule and requests information from licensees that propose a partial site release in order to facilitate NRC evaluation of the proposed action. However, the RIS does not require licensee action as would a regulation. Following this alternative would avoid expenditure of NRC resources on rulemaking. However, the lack of regulations providing a standardized process for requesting approval of a partial site release could result in the application of inconsistent or unnecessary standards to the related technical reviews and unnecessary expenditure of industry and NRC resources in determining appropriate standards and processes for each case.

An advantage of this alternative is that, following the guidance in RIS 2000-19, an environmental review would be included in those partial site release cases involving a license amendment request and in selected cases involving a licensee's letter request. Also, public notification provisions contained in RIS 2000-19 should help ensure that all environmental concerns related to a proposed release are considered.

A drawback of this alternative is that an adverse impact on public health and safety could result from partial site releases at reactor sites because of a lack of regulation specifically applying the radiological criteria for release of property for unrestricted use. Further, taking no action could result in the loss of information related to the radiological condition of released areas. This step would have a direct effect on the ultimate decommissioning of the site.

Alternative 1 is not a preferred option because it would not address the concern that continued regulation of partial site release on a case-by-case basis would be inconsistent and inefficient. The lack of a standardized process for partial site release could jeopardize the effectiveness of the ultimate decommissioning of a facility if the radiological standards of 10 CFR Part 20 were not properly applied. The current situation also could allow licensees to pursue partial site releases that circumvent the intent of the license termination rule by using a piecemeal approach to clearing property for unrestricted use. These health and safety considerations were an important factor in the NRC's determination that this option was not acceptable.

Alternative 2: Broadscope rulemaking: Revise 10 CFR Parts 2, 20, 30, 40, 50, 70, and 72 to address partial site releases at a variety of facility types. Following this alternative could improve overall efficiency by addressing partial releases of all types of facilities in a single, large effort. However, the short-term resource expenditures to expand the scope of rulemaking would be significant because of the larger number and the greater diversity of stakeholders involved. Also, the different schedules required for the decommissioning of materials and reactor facilities could result in some differences in the requirements for partial site releases in any case.

This alternative could provide clear and consistent regulation of partial releases for all classes of licensees and could allow guidance developed for decommissioning and license termination to be used for partial site releases. This approach could help ensure that the radiological consequences associated with partial site releases at all licensed facilities do not

present an undue risk to public health and safety. However, current regulations for materials licensees address partial site release to a limited extent so that some NRC review is involved. Thus, the regulatory gap, and its associated environmental impact being addressed by the proposed rule for reactor licensees, is not as significant for materials licensees.

Alternative 2 is not a preferred option because it is not expected to provide the timely rulemaking necessary to address several near-term proposed partial releases of reactor sites. Including other facility types in the proposed rule would add many additional technical issues that are not concerns for power reactor sites. Partial site releases for materials licensees are addressed to a limited extent in other regulations (i.e., Parts 30, 40, 70, and 72). The proposed rule will change the requirements for reactor sites but will not affect regulation of materials licensees. The impacts associated with license termination activities at a wide variety of sites that could be decommissioned were considered in the GEIS, NUREG-1496, and the proposed rule is not expected to alter the conclusions in that study. In the future, the staff may consider changes to the regulations for materials licensees to make the requirements consistent with the proposed rule for reactor licensees.

In summary, the proposed rulemaking would prevent the potentially adverse environmental impact of the first option - that a partial site release could hinder the eventual safe decommissioning of a reactor site. The proposed rulemaking would require NRC review of proposed partial site releases, applying the license termination radiological release criteria. The no-action alternative would not ensure NRC review nor the use of specific release criteria, thus presenting the potential for adverse environmental impacts.

The environmental impacts under the proposed action and the second alternative at reactor sites are identical because both options use the same radiological criteria for partial site release. Pursuing a broad-based rulemaking for all licensees would add technical complexity to the rulemaking and significantly delay implementation of the proposed rule for reactor sites. This step would allow the continued potential for adverse environmental outcomes at reactor sites pursuing partial site releases until the rulemaking became final. Partial site releases of non-reactor sites were considered in the existing license termination regulations, but a regulatory gap exists for reactor facilities. The opportunity exists for NRC review of proposed partial releases of non-reactor sites. Thus, the regulatory gap that exists for reactor sites is not an issue for non-reactor sites, and there is much less potential of an adverse environmental result compared to the existing situation for reactor sites. In short, pursuing the proposed rule addresses a potential for significant environmental impact at reactor sites. Similar adverse environmental consequences are not expected for non-reactor licensees under existing regulations.

Agencies and Persons Consulted

The NRC developed the proposed rule and this environmental assessment. The NRC sent this environmental assessment to all State liaison officers for comment.

Finding of No Significant Impact

On the basis of the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the action.

References

1. *Code of Federal Regulations*, Title 10, Chapter I, Parts 2, 20, 30, 40, 50, 51, 70, and 72.
2. NUREG-1727, "NMSS Decommissioning Standard Review Plan," September 2000.
3. "Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities," NUREG-1496, Volume 1, July 1997.
4. NRC Regulatory Issue Summary 2000-19, "Partial Release of Reactor Site for Unrestricted Use Before NRC Approval of the License Termination Plan," October 24, 2000.

ATTACHMENT 4

Disposition of Staff Requirements Memorandum (SRM-SECY-00-0023)

Comments on Partial Site Release Rulemaking

**Disposition of Staff Requirements Memorandum (SRM-SECY-00-0023)
Comments on Partial Site Release Rulemaking**

In response to SECY-00-0023, the Commission issued a staff requirements memorandum (SRM) dated April 26, 2000. In the SRM, the Commission approved the staff's rulemaking plan for partial site release with several comments.

Comment 1: Coordination with NMSS and RES

A. Commission Direction

The staff (NRR) should coordinate development of this rule with NMSS and RES to ensure that a consistent approach to partial site release and dose modeling is applied across strategic arenas.

B. Staff Response

NRR has collaborated with NMSS in developing the proposed rule since a May 1999 NEI/EPRI meeting in which NRC and licensees discussed partial site release issues. NMSS concurred with the February 2000 partial site release rulemaking plan and this proposed rule package. NMSS has jointly participated with NRR in a number of meetings and workshops related to partial site release and the license termination process. The partial site release plan was presented to the public and industry during the NMSS Decommissioning Workshop in November 2000. In addition, partial site release has been the subject of several presentations to the NRR/NMSS Decommissioning Management Board. Most recently, NMSS has agreed to provide licensee and staff guidance regarding the evaluation of potential interactive dose effects as a result of partial site releases (see Comment #3, below). This guidance will ultimately be incorporated in NUREG-1727, "NMSS Decommissioning Standard Review Plan."

RES has provided a technical point of contact with regard to partial site release issues and has concurred with this proposed rule package. During its review, RES determined that no technical basis exists for specifying a distinguishability from background release criteria and, as a result of its recommendation, the criteria has been deleted from the proposed rule. The proposed release area's classification as either impacted or non-impacted remains the sole radiological criterion by which it is determined whether the release can be approved by letter as opposed to a license amendment.

Comment 2: Schedule for Completion of the Rulemaking

A. Commission Direction

The staff should submit a schedule for completion of the rulemaking as part of the proposed rule package.

B. Staff Response

The proposed schedule milestones for the rulemaking are as follows:

Publish proposed rule: Date of Commission's SRM for proposed rule plus 4 weeks.

Final rule to Commission: Date of Commission's SRM for proposed rule plus 12 months.

Comment 3: Synergistic Dose Effects

A. Commission Direction

Because the nature and scope of the proposed evaluation of "synergistic" effects are unclear, the staff should, as it finalizes the rulemaking plan, more clearly define the possible role of "synergistic" effects. In addition, the staff should ensure that this effort is coordinated, as necessary, with NMSS' development of the standard review plan for license termination.

B. Staff Response

In October 2000, NRR formally asked NMSS's Division of Waste Management to provide licensee and staff guidance on evaluating potential interactive or synergistic dose effects as a result of partial site releases. NMSS was requested to address the following objectives:

1. Identify scenarios and determine the extent to which interactive or synergistic dose effects could occur between parts of a site as they are released before license termination and between parts of a site previously released and the remainder of the site as it is when the license is terminated. Additionally, answer the questions in the Commission's SRM (see Comment # 5 below).
2. Identify changes needed in the guidance in the current NMSS Decommissioning Standard Review Plan to address partial site releases and provide licensees with acceptable methods for demonstrating compliance with the dose criteria of 10 CFR Part 20, Subpart E, where interactive or synergistic dose effects could occur.
3. Suggest changes in licensee recordkeeping, historical site assessments, radiological surveys, or other related requirements as a result of changing guidance to account for synergistic or interactive dose effects. NRR would incorporate the suggested changes in the proposed rulemaking language where appropriate.
4. Incorporate the guidance identified in Objective 2 above into NUREG-1727, "NMSS Decommissioning Standard Review Plan."

In a memorandum dated March 28, 2001, NMSS responded to the above request. The specific responses to the questions of the Commission and NRR provided in the memorandum are included in this attachment. The key points of the responses to the questions of the Commission and NRR are as follows:

- NMSS has not identified any scenarios that would result in synergistic effects; all interactions between the partial site and the rest of the site are additive;
- NMSS is developing guidance, in the form of a staff technical position, that will address how to use NUREG-1727 and how to perform dose modeling when reviewing a partial site release request;
- The guidance will address the issues raised by the Commission, such as groundwater; and,
- The goals of the review process are finality in approving the partial site release and recognition and identification of issues that will need to be addressed during future decommissioning of the remainder of the site.

The dose modeling guidance, including guidance on how to use the rest of the NMSS Standard Review Plan (NUREG-1727) relative to partial site releases, is scheduled for completion in June 2001. Discussions on the guidance will be incorporated into the final partial site release rulemaking.

Comment 4: Part 2, Subpart L Informal Hearings

A. Commission Direction

Although the staff's proposal to apply Section 2.1201(a)(3) of Part 2, Subpart L, appears reasonable, the staff should ensure that the approach taken in this rulemaking is consistent with the Commission decision on the revision of Part 2 (currently under consideration).

B. Staff Response

As stated in SECY-00-0023, the staff believes that informal Part 2, Subpart L, hearings are appropriate for hearings requested in response to an amendment for a partial site release. It is recognized, however, that the Commission has recently approved with comment a proposed rule (SECY-00-0017) that would expand the use of informal hearing procedures to include amendments such as those for partial site releases. No amendment to Part 2, Subpart L, would be required to permit use of these informal hearing procedures for partial site release amendments if the proposed rulemaking of SECY-00-0017 is adopted as a final rule. The staff will monitor the progress of the rulemaking and delete the amendment to Part 2 from the final partial site release rule as appropriate.

Comment 5: Dose Contributions

A. Commission Direction

As part of the rulemaking, the staff should consider several issues discussed in SECY-00-0023 guided by focused interactions with stakeholders, such as (1) Would the dose contribution from the released portion of the site need to be calculated, particularly in cases where residual radioactivity has significantly decayed, thereby reducing the potential public dose? (2) What would happen in cases where subsequent owners of the released portion of the site engage in activities (licensed or unlicensed) that result in a higher dose contribution from this portion of the site--would this dose "count against" the Part 20 allowable dose limit for unrestricted use? and (3) Would the contribution from the groundwater pathway need to be recalculated, if years have elapsed between the partial site release and license termination?

B. Staff Response

In its memorandum of March 28, 2001, discussed above, NMSS provided specific responses to the Commission's questions. These responses are included with this attachment.

Comment 6: Timeliness Rule

A. Commission Direction

The proposed rule package should clearly discuss the role of the timeliness rule relative to partial site release.

B. Staff Response

A discussion in the *Federal Register* notice (Attachment 1 to this Commission paper) makes it clear that the rule for timeliness in decommissioning for facilities in § 30.36, § 40.42, and § 70.38 is not applicable to a partial site release at a power reactor site.

Comment 7: 10 CFR 20.2002 Disposals

A. Commission Direction

The proposed rule package should clearly discuss that 10 CFR 20.2002 does not provide for partial site release and 10 CFR 20.2002 disposals on those portions of the site proposed for release will be considered impacted areas.

B. Staff Response

A discussion in the *Federal Register* notice (Attachment 1 to this Commission paper) makes it clear that 10 CFR 20.2002 is not appropriate for a partial site release and that disposals under 10 CFR 20.2002 on those portions of the site proposed for release will be considered impacted areas.

Comment 8: Rulemaking Focused on Power Reactors

A. Commission Direction

The proposed rule package should clearly discuss that this rulemaking narrowly focuses on power reactor licensees to be responsive to current industry needs, and that a separate rulemaking is needed to address the wide variety of materials sites, many of which are technically more complex from a decommissioning perspective than reactor sites, to provide a uniform and consistent agency approach to partial site release.

B. Staff Response

The *Federal Register* notice (Attachment 1 to this Commission paper) states that the proposed rulemaking concerns partial site releases for power reactor licensees and that there will be a need for a future, separate rulemaking for materials sites.

Comment 9: Generic Communication

A. Commission Direction

The staff should continue to review requests for partial site release on a case-by-case basis and consider issuing a generic communication informing reactor licensees of this approach.

B. Staff Response

The staff plans to review requests for partial site release on a case-by-case basis until the rulemaking is complete. A regulatory issue summary (RIS 2000-019) was issued on October 24, 2000. This generic communication informs licensees of the pending rulemaking and tells how the staff will handle partial site release requests in the interim. The staff has no plans at this time to issue another generic communication.

ENCLOSURE TO ATTACHMENT 4
NMSS RESPONSES TO QUESTIONS RAISED ON
DOSE MODELING PARTIAL SITE RELEASE

This enclosure is taken from a memorandum dated March 28, 2001, from John T. Greeves to John A. Zwolinski, "Partial Site Release Dose Modeling Considerations" (ADAMS Accession Number ML010920318) with some clarifications incorporated following issuance.

COMMISSION QUESTIONS (SRM ON SECY-00-023, APRIL 26, 2000)

SRM-Q1. Would the dose contribution from the released portion of the site need to be recalculated, particularly in cases where residual radioactivity has significantly decayed, thereby reducing the potential dose?

SRM-R1. The licensee would need to consider credible scenarios involving the use of the previously released area and portions of the area being decommissioned. The U.S. Nuclear Regulatory Commission (NRC) will request the licensee to calculate dose to the average member of the critical group as defined in 10 CFR Part 20, and not the maximally exposed individual. In most cases, dose contributions from the partial site that has been released previously on the remainder of the site will not need additional calculations, as the guidance being developed by Office of Nuclear Material Safety and Safeguards (NMSS) is focused upon reducing the need for recalculation of the dose contribution from the partial site release, by taking prospective looks at possible interactions and dose consequences. If the licensee wished to take credit for the decay of the residual radioactivity on the previously released portions of the site, justification of the revised dose commitment would need to be included in the license termination plan. This justification may, in a few cases, require additional modeling.

SRM-Q2. What would happen in cases where subsequent owners of the released portion of the site engaged in activities (licensed or unlicensed) that result in a higher dose contribution from this portion of the site - would this dose "count against" the Part 20 allowable dose limit for unrestricted use?

SRM-R2. If the new owners perform activities at the released area that results in new information concerning the dose at the time the release was made, that was not considered or known when the partial site release was approved, the licensee and NRC would need to evaluate whether this new information results in the need for further dose calculations or whether it would impact the decommissioning plans for the remainder of the site. The licensee would not be responsible for any additional radioactive material brought onto or produced on the site by the new owners.

The philosophy behind unrestricted release is that NRC allows a licensee to release its site or portion of the site without any restrictions on its use. To remain cognizant of the potential dangers of a facility, the dose assessment uses the average member of the critical group and reasonable scenarios. In certain analyses, the staff may need to review a number of different

scenarios to provide reasonable assurance that the risk of a released site actually resulting in a real dose of greater than 0.25 mSv/y (25 mrem/y) is very small.

In this regard, the partial site release guidance being developed by NMSS minimizes the risk that a partial site release will either result in doses exceeding the 0.25 mSv/y (25 mrem/y) limit by itself or in conjunction with likely scenarios involving interactive effects with the rest of the site. The decision to allow a licensee to release a portion of their site will involve developing dose analyses of the bounding scenario for the site. At the time of decommissioning the remainder of the site, if the actions on the previously released land are widely different than those assessed in the original licensing action and likely to result in an interaction that was not previously addressed, the interaction would need to be reassessed. The impact of the reassessment depends on the interactions possible between contaminated areas of the released portion and the remainder of the site. As stated in SRM-R1 above, the NMSS guidance is focused at taking the possible future interactions into account during the initial partial site release and use those analyses as bases in the license termination to reduce the need for recalculation.

SRM-Q3. Would the contribution from the groundwater pathway need to be recalculated, if years have elapsed between the partial site release and license termination?

SRM-R3. In a small number of cases, the contribution from the groundwater pathway might need to be reevaluated at the time of final license termination. In general, the level of reevaluation will depend on a number of factors: (1) robustness of the scenarios and modeling at time of the partial site release, (2) the degree of difference between the site data and what was assumed in the partial site release, and (3) the amount of decay. The biggest issue will likely be the site data assumed in the partial site release. Licensees with little characterization of the potential or current groundwater contamination at the site during partial site release could have a higher risk of needing to reevaluate the groundwater pathways, depending on the assumptions used in the initial analyses.

NRR QUESTIONS

NRR-Q1. Identify scenarios and determine the extent to which interactive or synergistic dose effects could occur between parts of a site as they are released before license termination, and between parts of a site previously released and the remainder of the site as it exists when the license is terminated.

NRR-R1. The NMSS staff began looking at scenarios to determine whether we could identify specific scenarios that would result in interactions that would increase either the dose associated with the partial site release or the final license termination decision. It quickly became apparent that defining generic scenarios would be an inefficient use of resources because of all the possible variations with the different media, exposure scenarios, and size of both the partial site¹ and the main site.

In an alternate approach, the staff began developing a framework that would guide licensees and reviewers through a set of screening criteria that would eliminate various features, events or

¹ Partial site means the area the licensee is requesting to be released under this rulemaking.

processes from consideration. The general categories of the screening criteria are (1) the presence of residual radioactivity in various media (including effluent releases from the operating site), (2) availability of mechanisms to move material from one site to another (e.g., groundwater movement), and (3) exposure pathway analysis. The processes focus not only on the effect of the main site (or a previously released area) on the partial site but also the potential contribution of the partial site on the decommissioning of the main site. After a medium, such as ground water, is found to contain residual radioactivity the transport mechanism(s) that may contribute to a dose are screened to evaluate the capacity of the process to move material on or off the site. This is then compared to the residual radioactivity present or other processes moving material. Processes that pass these two screens will then need to be evaluated for their effect on the dose for the appropriate scenario.

In developing the conceptual framework, we did not identify any processes that were synergistic. The processes are simply additive and therefore, the guidance will discuss interactive effects rather than synergistic effects.

In addition to the framework to screen processes that may result in additional exposures, the guidance will discuss screening the possible assumption that someone in the future could use portions of both the partial site area and another contaminated area on the main site after final decommissioning. An example would be a situation where the size of the partial site is smaller than that assumed to fully implement the reasonable exposure scenario. In this example, between partial site release and the decommissioning of the rest of the site, an individual would only be exposed to residual radioactivity from the partial site and potential airborne effluents or direct radiation exposure from the rest of the site. After the decommissioning of the main site, it may be reasonable to assume that the individual continues to use the partial site as previously evaluated and use portions of the main site for activities that they were unable to perform due to the size of the partial site. If this is a reasonable scenario, the licensee would need to evaluate this scenario as part of the partial site release, using assumptions of the residual radioactivity present on the main site at the time of its license termination. The results and assumptions of this scenario would be reviewed as part of the historical site assessment for the final license termination to verify that the data or assumptions used were similar to the available data at the time of final license termination.

The goal of the NMSS staff's framework is to maximize the degree of finality in decisions about partial site releases. It considers both the impact of the main site on the partial site releases exposures, and the impact of the partial site release on the dose modeling scenarios or source terms used in the final decommissioning action. By doing this, the licensee, NRC, and the public would be aware of potential issues that may arise in the future decommissioning of the rest of the site, including constraining the concentration limits allowable at time of final license termination. Therefore, any decisions made will be more robust and more unlikely to result in the released portion of the site needing additional remediation or intervention, or unduly constraining the decommissioning of the main site.

NRR-Q2. Identify needed changes to the guidance currently provided in the NMSS Decommissioning Standard Review Plan (NUREG-1727, SRP) in order to address partial site releases and provide licensees with acceptable methods for demonstrating compliance with the dose criteria of 10 CFR Part 20, Subpart E, where interactive or synergistic dose effects could occur.

NRR-R2. The current guidance is very general and, with a little effort, can be used nearly as is for partial site releases. Review of the SRP has found a few general issues that will need to be addressed, including the implied purpose of the document (final site decommissioning), the use of “site” and “facility” nearly interchangeably, the use of “all” statements in informational needs, wording of evaluation findings, and the historical site assessment and dose modeling sections will need additional guidance provided for partial site releases.

The NMSS staff is looking into different methods for addressing these issues. The staff is proceeding on a plan to create a staff technical position that will include all of these changes and additional material, which will be inserted into the SRP during a future revision. At the preliminary stages, it appears that a section on how to use the SRP for partial site releases will help clarify a number of these issues. The historical site assessment section will need a specific subsection addressing previous partial site releases. The dose modeling section will need a few word changes and the supporting Appendix C will need a new subsection on partial site release and how it affects scenario development and review.

NRR-Q3. Provide NRR with any suggested changes in licensee recordkeeping, historical site assessments, radiological surveys, or other related requirements as a result of identified guidance in accounting for synergistic or interactive dose effect issues.

NRR-R3. After reviewing the latest version of the rulemaking package, no issues related to the guidance, either developed or being developed, and the requirements in the proposed rule were found. Modification to the guidance will need to properly account for the requirements in final rule. A number of the issues that would need changes are discussed in NRR-R2.