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DRAFT REGULATORY GUIDE

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STANDARD FORMAT AND CONTENT FOR
DECOMMISSIONING PLANS FOR NUCLEAR REACTORS

FOR COMMENT

This regulatory guide is being issued in draft form to involve the public in the early stages of the development of a regulatory position in this area. It has not received complete staff review and does not represent an official NRC staff position.

Public comments are being solicited on the draft guide (including any implementation schedule) and its associated regulatory analysis or value/impact statement. Comments should be accompanied by appropriate supporting data. Written comments may be submitted to the Regulatory Publications Branch, DFIPS, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Copies of comments received may be examined at the NRC Public Document Room, 2120 L Street NW., Washington, DC. Comments will be most helpful if received by December 29, 1989.

Requests for single copies of draft guides (which may be reproduced) or for placement on an automatic distribution list for single copies of future draft guides in specific divisions should be made in writing to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Director, Division of Information Support Services.

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INTRODUCTION

Purpose and Applicability

General requirements for applications for license termination and decommissioning nuclear reactors are contained in 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," in § 50.82, "Applications for Termination of Licenses." On June 27, 1988 (53 FR 24018, to be effective July 27, 1988), the Commission published amendments to 10 CFR Part 50, along with other parts of its regulations, concerning specific criteria for decommissioning nuclear facilities. The revised § 50.82 requires that an application for license termination be accompanied or preceded by a proposed decommissioning plan.

This draft regulatory guide has been developed and issued for public comment in conjunction with publication of the decommissioning rule. The purpose of this guide is to identify the information needed and to present a format acceptable to the NRC staff for preparing and submitting a decommissioning plan. The NRC staff suggests the use of this Standard Format for decommissioning plans to facilitate their preparation by licensees and their timely and uniform review by the NRC staff and as guidance in use of the Standard Review Plan for decommissioning plans. Although this guide was developed primarily for power reactors, it should also be used by nonpower reactors except where it is clearly not applicable to the latter.

Any information collection activities mentioned in this draft regulatory guide are contained as requirements in 10 CFR Parts 20, 50, and 70, which provide the regulatory basis for this guide. The information collection requirements in 10 CFR Parts 20, 50, and 70 have been cleared under OMB Clearance Nos. 3150-0014, 3150-0011, and 3150-0009, respectively.

A decommissioning plan should show that the facility can be decommissioned in a safe manner and describe the licensee's plans to demonstrate that the facility and site will meet criteria for release for unrestricted use. This plan must be approved by the NRC staff before major decommissioning procedures are started. The rule requires a licensee to submit a proposed decommissioning plan within two years after permanently ceasing operation and no later than one year prior to expiration of the operating license. In the case of a facility

that permanently ceased operations before the date of the effective rule, a final decommissioning plan is not required until the licensee decides to terminate the license. In this case, the NRC staff may request additional information on a case-by-case basis. In addition to the decommissioning plan, amended paragraph 51.53(b) requires each applicant for a license amendment authorizing the decommissioning of a production or utilization facility to submit with its application a separate document entitled "Supplement to the Applicant's Environmental Report -- Postoperating License Stage." This supplement would reflect any new information or significant environmental change associated with the applicant's proposed decommissioning activities.

The NRC staff estimates that review, evaluation, and approval of a decommissioning plan for power reactors may require about a year. It may take a year for a licensee to prepare a plan for submittal. Thus, preparation of a decommissioning plan should start as soon as practical after a licensee decides to permanently shut down a facility.

In some cases the information requested, such as in Sections 2.4, 3.2, 3.3, 5, 7, and 8, may be the same or similar to information previously submitted. Information contained in previous submittals, statements, or reports may be incorporated by clear and specific references, and only changes need be submitted.

In order to terminate a license, the NRC must determine that release of the facility and site for unrestricted use will not constitute an unreasonable risk to the health and safety of the public. To make such a determination, there must be evidence to show that radiation levels of the facility, site, and adjacent environs permit release for unrestricted use. Residual radioactive contamination limits are the subject of interim guidance under preparation and in regulatory guides; present guidance is contained in Regulatory Guide 1.86. The decommissioning rule, however, requires submittal of a final radiation survey plan as part of the decommissioning plan. Plans for a final radiation survey should be designed to provide evidence, with a high degree of assurance, that residual radioactive contamination levels will meet criteria for release for unrestricted use. A final radiation survey plan should also be designed so that procedures, results, and interpretations can be verified by the NRC staff.

Preliminary Decommissioning Plan

In addition to the requirements of § 50.82 regarding submittal of a decommissioning plan, paragraph 50.75(f) requires each licensee at or about 5 years prior to the projected end of operation to submit a preliminary decommissioning plan containing a cost estimate for decommissioning and an up-to-date assessment of the major technical factors that could affect planning for decommissioning. Factors to be considered in submitting this information include:

1. The decommissioning alternative or method anticipated to be used;
2. Major technical actions necessary to carry out decommissioning safely;
3. The current situation with regard to disposal of high-level and low-level radioactive waste;
4. Residual radioactivity criteria;
5. Other site-specific factors that could affect decommissioning planning and cost.

The preliminary decommissioning plan should contain sufficient information to support a decommissioning cost estimate and should consider the relevant information listed above that could be important to adequate planning and funding for decommissioning. The format presented in Section 2 of this regulatory guide may be used in preparing the preliminary decommissioning plan. The preliminary decommissioning plan need only address the five factors listed above and may be substantially less detailed than the decommissioning plan. Draft Regulatory Guide DG-1003 is being developed to provide guidance on the information to be provided in support of the cost estimate in the preliminary decommissioning plan.

Decommissioning Alternatives

More than one alternative or method for decommissioning may be acceptable, depending on the type of residual radioactivity present, the design and number

of facilities at a site, the licensee's financial structure, and other factors. There are basically two decommissioning alternatives. One is to start decommissioning shortly after cessation of operations and proceed continuously to completion. The other is to perform limited decommissioning activities to prepare the facility for storage, retain the facility in a safe condition for a period of time, and subsequently decontaminate the facility and site or allow the radioactivity to decay to radiation levels that permit release for unrestricted use. Within this framework, three decommissioning alternatives or methods have been described and defined in NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" (Ref. 1). These terms will be used in this guide and are defined as follows:

DECON is the method in which the equipment, structures, and portions of a facility and site containing radioactive contaminants are removed or decontaminated to a level that permits the property to be released for unrestricted use shortly after cessation of operations.

SAFSTOR is the method in which the nuclear facility is placed and maintained in a condition that allows the nuclear facility to be safely stored and subsequently decontaminated (deferred decontamination) to levels that permit release for unrestricted use.

ENTOMB is the method in which radioactive contaminants are encased in a structurally long-lived material, such as concrete. The entombed structure is appropriately maintained, and continued surveillance is carried out until the radioactivity decays to a level permitting unrestricted release of the property.

If either the SAFSTOR or the ENTOMB decommissioning method is selected, a decommissioning plan would contain (1) the details for preparing the facility for safe storage or for entombment, (2) plans for monitoring and surveillance during the storage period, (3) plans for assuring funds for maintaining the facility and completing decommissioning, including the means of adjusting cost estimates and associated funding levels over the safe storage or surveillance period (guidance on funding is being developed in Draft Regulatory Guide DG-1003, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors"), and (4) a commitment to submit an updated plan prior to starting final decommissioning activities.

Graphic Presentations

Graphic presentations such as drawings, maps, diagrams, sketches, and tables should be employed where the information may be presented more adequately or conveniently by such means. Due concern should be taken to ensure that all information so presented is legible, that symbols are defined, and that scales are not reduced to the extent that visual aids are necessary to interpret pertinent items of information. These graphic presentations should be located in the section where they are primarily discussed.

References used should appear either as footnotes to the page where discussed or at the end of each chapter.

Physical Specifications

Paper size

(1) Text pages: 8-1/2 x 11 inches.

(2) Drawings and graphics: 8-1/2 x 11 inches; however, a larger size is acceptable provided the finished copy when folded does not exceed 8-1/2 x 11 inches.

Paper stock and ink. Suitable quality in substance, paper color, and ink density for handling and reproduction by microfilming or image-copying equipment.

Page margins. A margin of no less than 1 inch should be maintained on the top, bottom, and binding side of all pages submitted.

Printing.

(1) Composition: text pages should be single spaced.

(2) Type face and style: should be suitable for microfilming or image-copying equipment.

(3) Reproduction: may be mechanically or photographically reproduced. All pages of text should be printed on both sides and the image printed head-to-head.

Binding. Pages should be punched for standard 3-hole loose-leaf binders.

Page numbering. Pages should be numbered with the digits corresponding to the chapter followed by a hyphen and a sequential number, e.g., the third page of Chapter 4 should be numbered 4-3. Do not number the entire report sequentially.

Table of Contents. A table of contents and an index of key items should be included.

Procedures for Updating or Revising Pages

Data and text should be updated or revised by replacing pages. The changed or revised portion on each page should be highlighted by a "change indicator" mark consisting of a bold vertical line drawn in the margin opposite the binding margin. The line should be of the same length as the portion actually changed.

All pages submitted to update, revise, or add pages to the report should show the date of change and a change or amendment number. A guide page listing the pages to be inserted and the pages to be removed should accompany the revised pages. When major changes or additions are made, a revised Table of Contents should be provided.

Exceptions to Physical Specifications

Other forms such as microform may be used; however, in accordance with paragraph 50.4(c), the licensee should contact the Division of Information Support Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301)492-8304, to obtain specifications and copy requirements prior to making any submittal in other than paper form.

CONTENT OF DECOMMISSIONING PLAN

1. SUMMARY OF PLAN

This section should contain a brief narrative description of the decommissioning plan proposed by the licensee. Such topics as decommissioning method selected, final estimated cost, amount of available funds, major tasks and schedules (in particular the estimated date for completion of decommissioning), items subject to quality assurance (controls and audits), activities and tasks* that may be performed by the licensee or a contractor, and the final radiation survey plan should be included.

2. CHOICE OF DECOMMISSIONING ALTERNATIVE AND DESCRIPTION OF ACTIVITIES INVOLVED

2.1 Decommissioning Alternative

In this section, the licensee should describe the decommissioning alternative or method selected (DECON, SAFSTOR, or ENTOMB; see discussion in the Introduction).

For an electric utility licensee, if the planned method will result in completion of decommissioning more than 60 years after cessation of operations, an evaluation of the factors causing this delay should be presented. For a licensee other than an electric utility, if the planned method will result in delayed completion of decommissioning, an evaluation of the factors causing this delay should be presented. Paragraph 50.82(b)(1) contains requirements on the length of time decommissioning may last and the factors to be considered in evaluating requests for longer than normal delays.

2.2 Decommissioning Activities, Tasks, and Schedules

2.2.1 Activities and Tasks

In this section, the licensee should list or tabulate activities and tasks related to decommissioning safety. For major tasks involving radiation, an

*For the purposes of this guide, an "activity" is an organized unit of work for performing a function and may consist of several tasks. A "task" is a specific work assignment or job.

estimate of occupational dose, in person-rem, to complete the task should be provided. This should include such tasks as removal and shipment of the reactor vessel and internals, the dryer and separator, the sacrificial shield, and contaminated piping, equipment, and concrete in the containment, auxiliary or radwaste building, and turbine building (for BWRs), as well as decontamination of systems and operation of the liquid and solid radwaste systems. A table should be submitted that lists each task and associated exposure, in person-rem, and total cumulative exposure for the entire decommissioning effort. It is important that ALARA be considered in the initial planning of activities and tasks.

If SAFSTOR or ENTOMB is selected, activities and tasks related to preparing the facility and site for storage should be provided in detail. Activities and tasks for maintaining the facility and site in safe storage or following entombment and for final decommissioning should be described to the extent known.

References 2, 3, 4, and 5 provide information that may be helpful in developing the lists prepared in this section.

2.2.2 Schedules

For major activities, the relationship between activities and tasks should be shown. Where pertinent, the schedules for accomplishing interrelated activities and tasks should be delineated. Schedules or diagrams should clearly indicate the estimated time for completion of decommissioning.

2.3 Decommissioning Organization and Responsibilities

In this section, the licensee should identify key positions in the decommissioning organization and describe their functions. The lines of authority up to the corporate level should be indicated. The education, training, and experience requirements should be described for positions important to decommissioning safety. The person with ultimate onsite authority should be designated by position. Additionally, the decommissioning organization should include a corporate radiation committee (or equivalent) to monitor the decommissioning operation to ensure that it is being performed safely. The committee should review and audit major decommissioning operations dealing with

special nuclear material, radioactive material, radiological controls, review procedures, records, reportable occurrences under Parts 20 and 50, and changes made in accordance with § 50.59. The committee should be responsible to high-level corporate management.

2.4 Training Program

This section should contain a description of the proposed training program, which includes training contractor personnel as well as licensee employees. The description should include the scope of training in decontamination and other decommissioning activities, health physics, and the use and maintenance of radiation surveillance and monitoring equipment. The background and experience of people performing the training should be given.

2.5 Contractor Assistance

The licensee may choose to accomplish some or all decommissioning activities and tasks by using contractors. However, the responsibility for health and safety during decommissioning rests with the licensee and all license requirements must be complied with. For each contracting organization, describe the scope of work to be accomplished, the administrative control system to be used to ensure adequate health and safety protection, and the qualifications and experience of the contractor.

3. PROTECTION OF OCCUPATIONAL AND PUBLIC HEALTH AND SAFETY

3.1 Facility Radiological Status

3.1.1 Facility Operating History

The licensee should describe historical information on operational occurrences that could adversely affect decommissioning safety. Such things as spills or releases that resulted in significant residual radioactive contamination, the specific location of normally inaccessible systems and equipment that may contain high levels of radiation, and areas of the site that may contain excessive radioactive contamination should be included in the description.

This type of information can be obtained from facility records and personnel familiar with the facility. This information is important to safety and should be considered when preparing plans and procedures for decommissioning activities.

3.1.2 Current Radiological Status of Facility

Radiation levels of contaminated systems, structures, and components should be established. It is recognized that complete information may not be available at the time of submittal of the decommissioning plan. However, sources of radiation that are the basis for radiation protection should be described by either measurement or calculation. Information in this section should be updated as additional radiation surveys are made, but the updates need not be submitted to NRC. Radiation sources should be described by radioactivity level (R/hr) and location; major sources of radioactivity should be located on plant layout drawings. For all sources, including neutron-activated sources, the basis for determining the radioactivity levels should be provided.

3.2 Radiation Protection

3.2.1 Ensuring that Occupational Radiation Exposures Are As Low As Is Reasonably Achievable (ALARA)

The licensee should state the policy for keeping occupational radiation exposures ALARA during decommissioning. Modification of the existing ALARA plan or an ALARA plan for decommissioning should be submitted. This section should contain a description of methods for occupational radiation protection. It should provide information on equipment, special techniques, and practices that will be used by the licensee in meeting the standards for protection against radiation of 10 CFR Part 20, including ALARA.

Management positions responsible for radiation protection and maintaining occupational exposures ALARA during decommissioning should be described. Knowledge from previous decommissioning reports and from the available literature should be addressed to show how it will be used to improve decommissioning designs and procedures.

3.2.2 Health Physics Program

The administrative organization of the health physics program to be in effect during decommissioning should be described. The criteria for selection of equipment and instrumentation for performing radiation and contamination surveys and personnel monitoring, and special instruments for detection of low levels of radiation, should also be provided in this section. The use, storage, calibration, testing, and maintenance for these instruments should be described. The policy, methods, frequency, and procedures for effluent monitoring, conducting radiation surveys, and personnel monitoring should also be described. Where appropriate, only changes to the existing program may be included, but a summary of the current information may be needed for clarity.

3.3 Radioactive Waste Management

3.3.1 Fuel Disposal

New fuel and irradiated spent fuel at research and test reactors should be disposed of offsite before decommissioning starts. The Department of Energy will accept new and irradiated fuel from research and test reactors. At power reactors, onsite spent fuel storage may be necessary at a permanently shutdown reactor facility until a Federal repository is available. The SAFSTOR decommissioning method is compatible with long-term onsite storage of spent fuel.

3.3.2 Radioactive Waste Processing

The licensee should describe how gaseous radioactivity and liquid and solid radwastes are generated and the systems used for their treatment. Relate the discussion to radioactivity concentrations, volumes of radwaste, use of existing systems that will be retained in an operational status to process these radwastes; and describe the use of systems that will be installed. Schedules submitted in Section 2.2.2 should clearly indicate the availability of these systems.

3.3.3 Radioactive Waste Disposal

The plan should contain a description of the procedures, processes, and systems used for disposing of radioactive wastes. The plan should show how the requirements of § 20.311 of 10 CFR Part 20, 10 CFR Part 61, and applicable disposal site license conditions for processing and disposal of low-level radioactive wastes will be met. The plan should contain a projection of radioactive waste generation. This should include a detailed characterization of the wastes to be generated with projected volumes, radionuclide concentrations, waste forms and classification, and information on any significant quantities of special wastes such as mixed waste and chelates. The need for changes to the Site Radwaste Process Control Plan and Transportation Plan should be addressed. If radioactive wastes are to be stored onsite, the quantities of waste, the expected length of storage, the location of storage areas, radiation levels at access points, and the manner in which positive control will be maintained should be described. The plan should indicate the extent to which the site has been previously used to dispose of low-level radioactive wastes by land burial and indicate the remedial measures that are appropriate before the site can be released for unrestricted use and the license terminated.

3.4 Accident Analyses

A discussion of accidents that could significantly affect occupational or public health and safety during decommissioning that are significantly different from those evaluated for plant operations or maintenance should be presented in this section. Sufficient detail should be included so that significant potential accidents will be revealed and analyzed. References 2, 3, 4, and 5 contain information that may be helpful in analyzing accidents during decommissioning.

4. PROPOSED FINAL RADIATION SURVEY PLAN

The purpose of a final radiation survey plan is to provide the basis for verifying that the facility, site, and the contiguous adjacent environs meet radioactivity levels that permit release for unrestricted use.

In this section the licensee should submit a proposed final radiation survey plan. A description should be included that shows how the facility and site will be prepared to meet criteria for release for unrestricted use. The description should include (1) the proposed method for ensuring that sufficient data and all pertinent structures, systems, components, equipment, and the site and adjacent environs are included in the survey (maps, diagrams, and plant layout drawings may be used to facilitate presentation), (2) the type and operating conditions of instruments to be used, (3) methods to be used to obtain and analyze data, including the methodology to be used to ensure that instrument readings or sample analysis will be appropriately translated into the units to be reported (e.g., dpm/100 cm², pCi/g of soil), (4) information on pre-operational radiation survey results and other data on background radiation, and (5) methods to be used for auditing and verifying data.

If SAFSTOR is planned, discussion of the final radiation survey plan may be general, with details submitted as part of an updated decommissioning plan prior to the deferred dismantlement. For ENTOMB, termination of the license should be able to be based on a characterization of contamination carried out during the entombment sufficient to calculate contamination levels that will exist in the entombed structure at the end of the surveillance period. If part of the site is to be released for unrestricted use at the time of preparation for safe storage or entombment, detailed plans for a radiation survey on which this release can be based must be submitted.

The Supplementary Information to the final rule on "General Requirements for Decommissioning Nuclear Facilities" (53 FR 24018) states: "Acceptable levels of residual radioactivity for release of property for unrestricted use were not proposed as part of this rulemaking. Commission staff is participating in an interagency working group, organized by the Environmental Protection Agency (EPA), developing Federal guidance on this subject. Proposed Federal guidelines are anticipated to be published by EPA and EPA has issued an advance notice of proposed rulemaking (51 FR 22264, June 18, 1986). In the interim, NRC is developing interim guidance with respect to residual contamination criteria. Therefore, until such generic guidance for acceptable levels of residual radioactivity is available, the determination of suitability for release for unrestricted use must be made on a site-specific

basis using existing guidelines. Such guidelines are contained in Regulatory Guide 1.86, "Termination of Operating Licenses for Nuclear Reactors," and in Reference 6.

5. UPDATED COST ESTIMATE FOR DECOMMISSIONING METHOD CHOSEN AND PLAN FOR ASSURING AVAILABILITY OF FUNDS FOR COMPLETION OF DECOMMISSIONING

The licensee has already established a fund for decommissioning based either on the certification amounts in the regulation or on a cost estimate. The amount of the fund has been revised periodically during operation. In this section the licensee should present an updated cost estimate as required by paragraph 50.82(b)(4) based on the detailed information submitted in this plan.

References 2, 3, 4, 5, and 7 contain information on decommissioning costs that can be adapted to the individual case. The licensee should show how sufficient funds will be made available to accomplish decommissioning. Guidance on funding is being developed in Draft Regulatory Guide DG-1003, "Assuring the Availability of Funds for Nuclear Reactors." If either SAFSTOR or ENTOMB is selected and justified, the licensee should describe the plan to provide reasonable assurance that adequate funds will be available when needed to complete decommissioning.

6. TECHNICAL AND ENVIRONMENTAL SPECIFICATIONS IN PLACE DURING DECOMMISSIONING

Changes to plant technical and environmental specifications that apply to decommissioning operations should be submitted. Controls and limits on procedures and equipment to protect occupational and public health and safety should be specified. They should be derived from an analysis of the health and safety and environmental assessment of decommissioning the facility. The analysis should lead to the conclusion that the health and safety of the public and decommissioning personnel will be protected if all operations are performed within certain prescribed limits. Limits selected for a commitment to action should be specified.

Not all controls and limits on procedures and equipment to protect occupational and public health and safety during the active decommissioning phases, particularly for dismantlement procedures, need be in the form of technical

specifications; such procedures should provide some flexibility for changing conditions and possibly unforeseen factors. Care should be taken to structure technical specifications for decommissioning in such a way that they would automatically adjust or be discontinued as appropriate if conditions change. In this way, the need for repeated requests for modifications or elimination of technical specifications can be avoided.

7. QUALITY ASSURANCE PROVISIONS IN PLACE DURING DECOMMISSIONING

In this section the licensee should describe the Quality Assurance (QA) program to be established and executed during decommissioning. The equipment, such as plasma torches, portable ventilation, shielding, and procedures that will be subject to the QA controls and audits should be listed. The QA program should be established at the earliest practical time consistent with the schedule for accomplishing an activity or task. The positions and responsibilities for review and audit should be specified.

8. PHYSICAL SECURITY PLAN PROVISIONS IN PLACE DURING DECOMMISSIONING

A description of and a schedule for any proposed changes in the NRC approved physical security plan should be provided in this section.

IMPLEMENTATION

The purpose of this section is to provide information to licensees regarding the NRC staff's plans for using this regulatory guide.

This proposed guide has been released to encourage public participation in its development. Except in those cases in which a licensee proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the guidance to be described in the active guide reflecting public comments will be used in the evaluation of decommissioning plans submitted as part of an application for termination of license docketed after a date to be specified in the final version of this guide for all reactors with operating licenses.

REFERENCES

1. U.S. Nuclear Regulatory Commission, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," NUREG-0586, August 1988.
2. R. I. Smith, G. J. Konzek, and W. E. Kennedy, Jr., "Technology, Safety, and Costs of Decommissioning a Reference Pressurized Water Reactor Power Station" (prepared for the Nuclear Regulatory Commission by Pacific Northwest Laboratory), NUREG/CR-0130, June 1978; Addendum 1, July 1979; Addendum 2, July 1983; Addendum 3, September 1984; and Addendum 4, July 1988.
3. H. D. Oak et al., "Technology, Safety, and Costs of Decommissioning a Reference Boiling Water Reactor Power Station" (prepared for the Nuclear Regulatory Commission by Pacific Northwest Laboratory), NUREG/CR-0672, June 1980; Addendum 1, July 1983; Addendum 2, September 1984; and Addendum 3, July 1988.
4. N. G. Wittenbrock, "Technology, Safety and Costs of Decommissioning Nuclear Reactors at Multiple-Reactor Stations" (prepared for the Nuclear Regulatory Commission by Pacific Northwest Laboratory), NUREG/CR-1755, January 1982.
5. G. J. Konzek, "Technology, Safety, and Costs of Decommissioning Reference Nuclear Research and Test Reactors" (prepared for the Nuclear Regulatory Commission by Pacific Northwest Laboratory), NUREG/CR-1756, March 1982, and Addendum 1, July 1983.
6. Letter from John F. Stolz, USNRC, to Dr. Roland A. Finston, Stanford University, March 17, 1981; and letter from James R. Miller, USNRC, to Dr. Roland A. Finston, Stanford University, April 21, 1982. Both letters are available for inspection or copying for a fee in the USNRC Public Document Room, 2120 L Street NW., Washington, DC, under Docket Number 50-141.

7. J. P. Witherspoon, "Technology and Cost of Termination Surveys Associated with Decommissioning of Nuclear Facilities" (prepared for the Nuclear Regulatory Commission by Oak Ridge National Laboratory), NUREG/CR-2241 (ORNL/HASRD-121), February 1982.

The NUREG reports and regulatory guides mentioned in this guide are available for inspection and copying for a fee under the decommissioning file docket 43 FR 10370, at the Commission's Public Document Room, 2120 L Street NW., Washington, DC. NUREG reports and final regulatory guides are available for purchase from the National Technical Information Service, Springfield, VA 22161; and from the Superintendent of Documents, U.S. Government Printing Office, Post Office Box 37082, Washington, DC 20013-7982. Free single copies of draft regulatory guides are available on request from the Division of Information Support Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

DRAFT VALUE/IMPACT STATEMENT

1. PROPOSED ACTION

1.1 Description

On June 27, 1988, the Commission amended its rules in setting forth criteria for decommissioning of nuclear facilities (53 FR 24018). In the rule amendments, paragraph 50.82(a) of 10 CFR Part 50 requires that licensees submit a decommissioning plan with their application for termination of license. The proposed action is the publication of guidance that describes the information needed in a plan for completing decommissioning for nuclear reactor licensees. A draft regulatory guide would be issued for public comment in support of the amended rules on decommissioning.

1.2 Need

At the present time there is no published NRC guidance on the information needed in decommissioning plans. Specific guidance should be provided on the information needed in decommissioning plans so that applicants and licensees can prepare and submit these plans with a minimum of time and effort. This draft regulatory guide describes the kind of information needed for staff review and evaluation of decommissioning plans and presents a format that will facilitate this effort.

1.3 Value/Impact

1.3.1 NRC

This draft regulatory guide identifies and gives a format for presenting the information needed in a nuclear reactor decommissioning plan. This guidance should reduce correspondence between NRC and licensees and provide the basis for a consistent and efficient staff review of decommissioning plans.

Thus, application and use of this guidance by staff members who review licensee decommissioning plans will aid their review of these plans. The Regulatory Analysis for the decommissioning rule amendments estimated the staff time involved in review of licensee decommissioning plans. This guide does not add to this time but provides guidance for satisfying the requirements in the rule amendments regarding decommissioning plans, and in so doing, minimizes staff time to the extent practical.

1.3.2 Other Government Agencies

State or Federal Government agencies (for example, a State university) that hold a license from the NRC for a nuclear facility will be affected. The value/impact is expected to be similar to that for industry (see Section 1.3.3).

1.3.3 Industry

Industry should benefit from this guidance because it would facilitate the preparation and submittal of decommissioning plans and standardize licensing review procedures in this area. The Regulatory Analysis for the rule amendments on decommissioning estimated the impact on industry for implementation of requirements on decommissioning plan submittals. No additional impact is anticipated as a result of the proposed action since it merely provides guidance for satisfying the requirements of the rule regarding decommissioning plans, and in so doing, minimizes impact on industry to the extent practical. Publication of a draft guide will allow industry representatives to participate in development of a final regulatory guide by submitting comments.

1.3.4 Public

This proposed action would provide guidance to licensees on information to be submitted in the decommissioning plans. This should result in improved licensee submittals and NRC review of information important to protection of public health and safety during decommissioning. Thus, this proposed action would have a beneficial effect on public health and safety. In addition, issuance of a draft regulatory guide for public comment would also allow for broader input when developing the final guide.

2. TECHNICAL APPROACH

This draft guide does not set forth any technical positions, thus this section is not applicable.

3. PROCEDURAL APPROACH

3.1 Procedural Alternatives

Potential NRC procedures that may be used to promulgate the information contained in the guide are:

- Regulation
- Policy statement
- NUREG-series report
- Regulatory guide
- Branch technical position

Neither a policy statement nor a regulation are suitable for incorporating the degree of detail that will be presented in this guide. Branch technical positions (BTP) are sometimes prepared for specific guidance. However, no BTP is being developed on this subject. NUREG reports are a convenient means for providing information. However, NUREG reports usually contain only results of specific studies and are not suitable for providing guidance. A regulatory guide is the preferred course of action.

4. STATUTORY CONSIDERATIONS

4.1 NRC Authority

Authority for the proposed action is derived from the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, and implemented through the Commission's regulations cited in the introduction to the guide.

4.2 Need for Environmental Assessment

Issuance or amendment of guides for implementing regulations in Title 10, Chapter 1, of the Code of Federal Regulations is a categorical exclusion under paragraph 51.22(c)(16) of 10 CFR Part 51. Thus, an environmental impact statement or assessment is not required for this action.

5. RELATIONSHIP TO OTHER EXISTING OR PROPOSED REGULATIONS OR POLICIES

The draft regulatory guide is being issued for public comment in support of the rule amendments on decommissioning.

6. SUMMARY AND CONCLUSIONS

The proposed draft regulatory guide should be issued for comment.

**UNITED STATES
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