

MEMORANDUM TO: Frank P. Gillespie, Director  
Division of Inspections  
and Support Programs  
Office of Nuclear Reactor Regulation

FROM: Margaret V. Federline, Acting Director  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: DECOMMISSIONING PROCEDURES FOR FUEL CYCLE AND MATERIALS  
LICENSEES

Attached please find a Document Issuing Form and the Inspection Manual Chapter entitled "Decommissioning Procedures for Fuel Cycle and Materials Licensees" that has been developed by the staff of the Office of Nuclear Material Safety and Safeguards in conjunction with the staff of the Nuclear Regulatory Commission regional offices, the Office of Nuclear Reactor Regulation and the Office of General Counsel. Please include this Manual Chapter in the NRC Inspection Manual. Please note that a discussion of the comments, and their resolution, is not included as this manual chapter was developed via a consensus process between the participating organizations.

Attachments: As stated

Contact: Nick Orlando, NMSS  
415-6749

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October 3, 1996

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(memo only)



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 3, 1996

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Attachments: As stated

Contact: Nick Orlando, NMSS  
415-6749

# DOCUMENT ISSUING FORM

To: NRR, DISP. Director

From: Margaret V. Federline  
(Originating Director)

## 1. Number and title of document

Decommissioning Procedures for Fuel Cycle and Materials Licensees

## 2. Type of document

☒ Manual Chapter (MC)  
☐ Appendix  
☐ Technical Guidance

☐ Inspection Procedure (IP)  
☐ Temporary Instruction (TI)  
☐ 10 CFR Guidance

## 3. Type of action

☒ New document  
☐ Revision  
☐ Deletion

4.a. If a new IP is being prepared, state its need or purpose, whether it is for the "Core" Inspection Program, the SALP category it applies to, the direct inspection hours needed to perform it, and the inspection frequency.

b. If a TI or IP is being revised, state the reason for the revision, and if applicable, the resulting change in direct inspection hours or FTE, if any.

Core Program: ☒ Yes ☐ No SALP Category: \_\_\_\_\_ DIE: \_\_\_\_\_  
Inspection Frequency: \_\_\_\_\_

Statement: To establish policies and procedures for decommissioning fuel cycle and materials licensees

c. For any proposed addition in direct inspection hours that results from a or b above, state the increase in proposed hours and identify where the proposed corresponding reduction in direct inspection hours is to occur (Note: the total "Core" hours is a fixed number and cannot be increased without permission from the NRR Office Director).

DIE increase resulting from 4a or 4b: N/A

Proposed reduction, IP No.: N/A

Details of reduction: \_\_\_\_\_

N/A

- d. If new training requirements or the revision of current training requirements are needed as the result of the new IP, TI or revision of existing procedures, these should be identified. The group responsible for establishing and presenting the training should also be identified.

New training course required? \_\_\_Yes XNo

Revision to existing training course? \_\_\_Yes \_\_\_No

Lead Branch for establishing training: \_\_\_\_\_

Training to be given by: \_\_\_\_\_

Brief description of proposed training: \_\_\_\_\_

5. Provide a floppy disk with the file in the current version of Wordperfect and attach a hard copy of the document.

- a. Has document been reviewed by the technical editor? XYes \_\_\_No  
If not, state why \_\_\_\_\_

6. Special exhibits (anything that cannot be put in Wordperfect such as drawings, reductions, or block diagrams) are attached?  
\_\_\_Yes XNo \_\_\_N/A

7. Attach a summary of comments and resolutions. State comment, its source, and if not adopted why. Is summary attached? \_\_\_Yes XNo \_\_\_N/A

8. All approval signatures must be obtained in the order listed below:  
06. Check items 1-7 above and ensure all documents (floppy disk with file in Wordperfect & hard copy, special exhibits, comment summary and resolution, and any background information) are attached to this form before routing it for approvals.

a. Don H. Calabrese 9/24/96  
Originator/Date

b. W. L. J. W. 9/26/96  
Originator Branch Chief/Date

c. \_\_\_\_\_  
Originator Division Director/Date

d. \_\_\_\_\_  
PIPB, Manual Coord./Date

e. \_\_\_\_\_  
PIPB, Branch Chief/Date

f. \_\_\_\_\_  
DISP, NRR, Director/Date

9. Date received by PIPB  
Manual Coordinator \_\_\_\_\_

10. Change notice number and issue n,  
date: \_\_\_\_\_



## CHAPTER XXXX

### DECOMMISSIONING PROCEDURES FOR FUEL CYCLE AND MATERIALS LICENSEES

#### XXXX-01 PURPOSE

To establish policies and procedures for decommissioning fuel cycle and materials licensees.

#### XXXX-02 OBJECTIVES

02.01 To establish and compile general policies for the decommissioning of fuel cycle and materials sites.

02-02 To establish general procedures for the regulatory oversight of decommissioning of fuel cycle and materials sites.

02-03 To aid in the achievement of consistent actions by the staff involved in the decommissioning of fuel cycle and materials sites.

To meet these objectives, and assist individuals involved in decommissioning nuclear facilities, the Nuclear Regulatory Commission staff has developed the Office of Nuclear Material Safety and Safeguards (NMSS) Decommissioning Handbook which summarizes the regulations, policies, and procedures that shall be used by NRC staff during the decommissioning of nuclear fuel cycle and materials facilities subject to the Commission's jurisdiction. This manual chapter summarizes the basic framework for decommissioning these facilities, and directs the staff to the appropriate sections of the Decommissioning Handbook for specific information on the procedures to be followed by NRC staff overseeing NRC's decommissioning program at these facilities.

#### XXXX-03 DEFINITIONS

03.01 ALARA. (acronym for As Low as is Reasonably Achievable) means making every reasonable effort to maintain exposures to radiation as far below NRC's dose limits as is practical taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of licensed material in the public interest.

03.02 Categorical Exclusion. A category of actions which do not individually or cumulatively have a significant impact on the human environment and which the Commission has found to have no such effect in accordance with the procedures set out in 10 CFR 51.22.

03.03 Closeout Inspection. An inspection performed by NRC to determine if a licensee has adequately decommissioned its facility. Typically, closeout inspections are performed after licensees have demonstrated that its facility is suitable for release in accordance with NRC requirements.

03.04 Confirmatory Survey. A survey conducted by the NRC (or an NRC contractor) to verify the results of the licensee's Closeout Survey. Typically Confirmatory surveys consist of measurements at a small percentage of locations previously surveyed by the licensee to determine whether the licensee's results are valid and reproducible. NRC's requirements is the submission of NRC Form 314. If the licensee has satisfied all of

03.05 Decommission. To remove a facility safely from service and reduce residual radioactivity to a level that permits release of the property and termination of the license.

03.06 Decommissioning Plan (DP). A detailed description of the activities the licensee, or responsible party, intends to use to assess the radiological status of its facility; to remove radioactivity attributable to licensed operations at its facility to levels that permit release of the site in accordance with NRC's regulations and termination of the license; and to demonstrate that the facility meets NRC's requirements for release. A DP typically consists of several interrelated components, including: site characterization information; a remediation plan (which itself includes several components including a description of remediation tasks, a health and safety plan, and a quality assurance plan); site-specific cost estimates for the decommissioning; and a final status survey plan.

03.07 Environmental Assessment (EA). A concise public document that serves to:

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or Finding of No Significant Impact (FONSI).

2. Aid NRC's compliance with the National Environmental Policy Act (NEPA) when no EIS is necessary.

3. Facilitate preparation of an EIS when one is necessary.

03.08 Environmental Impact Statement (EIS). A detailed written statement as required by section 102(2)(C) of NEPA.

03.09 Environmental Report (ER). A report developed by a licensee that is submitted to support the licensee's amendment request. The ER is used by NRC staff to prepare EAs and EISs. The requirements for ERs are specified in 10 CFR 51.45 - 51.69.

03.10 Final Status Survey (FSS). A survey conducted by a licensee to demonstrate the radiological status of its facility. Typically, closeout surveys consist of evaluations for both fixed and removable residual radioactive material, and determinations



of radiation levels in formerly used areas. Also referred to as a Closeout Survey, or Termination Survey.

03.11 Finding of No Significant Impact (FONSI). A concise public document that briefly states the reasons why an action will not have a significant impact on the human environment.

03.12 Safety Evaluation Report (SER). The NRC staff's evaluation of a licensee's proposed action to determine if the proposed action can be accomplished safely.

03.13 Suitable for Unrestricted Use. A site at which the level of residual radioactivity distinguishable from background is sufficiently low so as to allow any public use of the site without restrictions.

#### XXXX-04 RESPONSIBILITIES AND AUTHORITIES

04.01 All NRC personnel implementing the decommissioning program for fuel cycle and materials facilities shall use the guidance identified in this manual chapter and the NMSS Decommissioning Handbook. This manual chapter and Decommissioning Handbook shall also be used by NRC personnel implementing the decommissioning program at: formerly licensed sites for which the licenses were previously terminated; sites involving source, special nuclear, or byproduct material subject to NRC regulation for which a license was never issued; and sites in NRC's Site Decommissioning Management Plan (SDMP) program (see below). Significant deviations from this guidance shall be employed only after review and approval by the appropriate NRC management.

NRC personnel implementing the decommissioning program for nuclear reactor facilities subject to regulation under 10 CFR Part 50 are not required to use the guidance identified in this manual chapter. NRC staff implementing the decommissioning program at uranium recovery facilities shall use the guidance in Manual Chapter 2801, "11e.(2) Byproduct Material Disposal Site and Facility Inspection Program."

04.02 Except as discussed above, this decommissioning program applies to all NRC licensees under 10 CFR Parts 30, 40, 70, and 72 undergoing decommissioning. The principal regulations governing decommissioning are: 10 CFR 30.4, 30.32, 30.35, 30.36, 40.4, 40.31, 40.36, 40.42, 70.4, 70.22, 70.25, 70.38, 72.3, 72.30, and 72.54.

04.03 The responsibility for implementing the decommissioning program at nuclear facilities resides with the NRC regional office in which the facility is located, or NMSS, as appropriate. The lead office has the responsibility for coordinating the implementation of the decommissioning program at the facility within NRC. In general, the regional office will assume lead responsibility for most licensed sites undergoing decommissioning. NMSS will provide overall program and policy direction for the regional offices for decommissioning

facilities. NMSS will also provide oversight guidance and site-specific support to the regions for all decommissioning facilities to ensure that licensees are conducting the decommissioning in a consistent manner. NMSS may assume oversight responsibility for sites listed on the SDMP, or others, after consultation with the regional office. Staff should refer to Section 1 of the NMSS Decommissioning Handbook for the procedures to be followed to determine the appropriate lead office for decommissioning nuclear facilities.

#### XXXX-05 GENERAL GUIDANCE

05.01 Timing of Decommissioning. NRC regulations at 10 CFR 30.36(d)(1-4), 40.42(d)(1-4), 70.38(d)(1-4), and 72.54(d)(1-3)<sup>1</sup> describe the conditions under which a licensed facility would be required to commence decommissioning operations.

In March 1990, NRC established the SDMP to help ensure the timely cleanup of sites warranting special attention by the Commission. As summarized in the SDMP Action Plan (57 FR 13389), NRC staff shall address the timing of SDMP site cleanups on a case-by-case basis, with the expectation the cleanup will be completed in about 4 years after operations that caused the contamination cease, or 3 years after issuance of an initial cleanup order.

Section 3 of the NMSS Decommissioning Handbook discusses the conditions under which licensed nuclear facilities, as well as SDMP sites, are required to commence decommissioning operations.

05.02 Radiological Criteria for Decommissioning<sup>2</sup>. Generally, licensees decommission their facilities with the intent of terminating the license and using the facility for activities that do not involve licensed material. These facilities must be decommissioned such that they do not contain residual radioactive

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<sup>1</sup>The effective date of the final rule on timeliness in decommissioning was August 15, 1994 (59 FR 36026, July 15, 1994). Licensees with unused facilities on August 15, 1994, are required to submit the required notifications to NRC by October 15, 1996. Within 12 months of submitting the notification, these licensees are required to submit a decommissioning plan (if required) and begin decommissioning their facilities upon approval of the plan by NRC. Unless otherwise approved by NRC, licensees are required to complete decommissioning their facilities within 24 months of initiating decommissioning operations. Licensees that have made decommissioning notifications prior to August 15, 1994 do not need to provide another notification. However, these licensees were required to submit a decommissioning plan, or request an alternative decommissioning schedule, by August 15, 1995.

<sup>2</sup>On August 22, 1994, (see 59 FR 43200) NRC announced its intention to amend its regulations to establish radiological criteria for decommissioning. As discussed in this announcement, NRC may consider decommissioning actions that would result in restricted use of the facility following decommissioning. Until criteria for decommissioning nuclear facilities are finalized the staff should use the interim radiological criteria identified in the SDMP Action Plan (57 FR 13389).

material levels in excess of NRC's criteria for unrestricted use. Section 4 of the NMSS Decommissioning Handbook summarizes NRC's interim radiological criteria for unrestricted use.

05.03 Decommissioning Records Management. SECY-90-316, "Decommissioning Records Plan (DRP)" and Records Management Guideline (RMG) 92-01, "Plan for Decommissioning Records," describe the records management and retention requirements for the decommissioning of licensed nuclear facilities. In general, the RMG requires that all records associated with decommissioning nuclear facilities be maintained for 20 years. Records that are determined to have significant historical value will be permanently retained. RMG 93-03, "Final Criteria for Determining That Records Should be Retained Permanently Because of Significant Historical Value," describes the criteria for determining which records have significant historical value and should be permanently retained. The Office of Information Resources Management has been assigned lead responsibility for implementing the requirements of the DRP. In addition, on May 16, 1996, NRC amended its regulations pertaining to the disposition of certain records when a license terminates licensed activities or licensed activities are transferred to another licensee (61 FR 24669). The rule requires that licensees transfer records pertaining to decommissioning, and certain records pertaining to off-site releases and waste disposal, to the new licensee if licensed activities will continue at the same site, and it requires that the new licensee forward these same records to NRC before the license is terminated. SECY-90-316, RMG 92-01, RMG 93-03, and NRC's decommissioning recordkeeping requirements are discussed in Section 5 of the NMSS Decommissioning Handbook.

05.04 The National Environmental Policy Act of 1969. 10 CFR Parts 2 and 51 describe the activities required for compliance with the Administrative Procedure Act (APA) and NEPA. 10 CFR Part 2 describes the procedures for the issuance, amending, transfer, or renewal of a license, including notifying State and local officials and the public of the NRC staff's actions, or intended actions, the public's involvement in the licensing process and the conduct of hearings related to licensing actions. 10 CFR Part 51 describes the procedures and requirements for evaluating licensees' proposed actions under NEPA including the development of EAs and EIS' and the requirement to notice these actions and solicit input from interested members of the public. NRC staff should refer to Section 13 of the NMSS Decommissioning Handbook for information on the appropriate procedures to be followed to comply with NEPA.

#### XXXX-06 SPECIFIC GUIDANCE

06.01 Decommissioning Types. Generally, the staff will evaluate the decommissioning of nuclear facilities using one of four reviews (referred to as "Types"), as discussed below. NRC staff should refer to Section 7 of the Decommissioning Handbook

to determine the appropriate decommissioning type for their site, as well as the actions that should be taken by NRC staff upon notification of a licensee's intent to decommission its facility.

Although it is anticipated that most licensees will fall under the decommissioning types as outlined, it should be expected that the actions may not always be appropriate for each licensee. The intent is to present the generally appropriate actions to be taken by NRC staff, recognizing that the unique nature of some facilities may require site-specific modifications to the procedures. The staff shall ensure that any departure from these established procedures is reviewed and approved by NRC management and documented in writing prior to their implementation.

#### 06.01.01 Type I Review

In general, facilities decommissioned under Type I only have used licensed material in a manner that would preclude its release into the environment, would not cause the activation of adjacent materials, or the contamination of work areas. Typically, facilities decommissioned under Type I would be limited to licensees that:

1. Possess and use only sealed sources and the most recent leak test demonstrates that the source(s) did not leak while in the licensee's possession; or
2. Possess and use relatively short-lived radioactive material (i.e.,  $T_{1/2} \leq 60$  days) in unsealed forms and the maximum activities authorized under the license have decayed to less than the quantities specified in 10 CFR Part 20, Appendix C.

Any significant leakage of the sealed source or sources (i.e.,  $>0.005 \mu\text{Ci}$ ), or if the activity of the radioactive material is in excess of the limits outlined in 10 CFR Part 20, Appendix C would require decommissioning under Type II or Type III decommissioning, described below.

Type I decommissioning would not require the licensee to develop a DP, or to perform a FSS. However, the licensee would be required to submit a completed NRC Form 314, or equivalent, and demonstrate that its facility was suitable for unrestricted use. This could be accomplished by the licensee demonstrating that it met either condition discussed above, or by performing an adequate FSS. NRC staff would evaluate the information submitted by the licensee, but would not perform either a closeout inspection or confirmatory survey at the licensee's facility.

NRC staff should refer to Section 8 of the NMSS Decommissioning Handbook for the procedures to be followed in decommissioning nuclear facilities under Type I.



## 06.01.02 Type II Review

Facilities decommissioned under Type II would have used licensed material in a manner that would not be expected to result in its release into the environment, not activate adjacent materials, or not be expected to result in persistent contamination of work areas. However, these licensees would not be able to demonstrate the radiological status in accordance with the criteria discussed under the Type I decommissioning above. Type II decommissioning would include licensees that:

1. Possess and use only sealed sources, but cannot demonstrate that the sources did not leak while in the licensee's possession (i.e., leak tests are not available or indicate contamination  $>0.005 \mu\text{Ci}$ ); or
2. Possess unsealed radioactive material with  $T_{1/2} \leq 60$  days but the maximum activities authorized under the license have not decayed to less than the quantity specified in 10 CFR Part 20, Appendix C at the time the licensee requests license termination; or
3. Possess unsealed radioactive material with  $T_{1/2} > 60$  days but  $\leq 120$  days<sup>3</sup>.

Type II decommissioning would not require the submission of a DP to NRC. However, these licensees would be required to submit a completed NRC Form 314, or equivalent, determine the radiological status of facilities, remove residual radioactive material, if necessary, and demonstrate that the facilities meet NRC's requirements. This demonstration could be made by submitting the results of a FSS to NRC for review and approval, or by other suitable means.

Typically, NRC staff would perform a Closeout Inspection at facilities decommissioned under Type II. Based on prior management of licensed material at the facility, and the results of the licensee's Final Status Survey, NRC may perform a Confirmatory Survey at these facilities. NRC staff should refer to Section 9 of the NMSS Decommissioning Handbook for the procedures to be followed in decommissioning facilities under Type II.

## 06.01.03 Type III Reviews

All licensees that are required to submit a DP in accordance with NRC regulations at 10 CFR 30.36(g)(1), 40.42(g)(1), or 70.38(g)(1), as well as all Part 72 licensees, would decommission their facilities under Type III or Type IV. The decommissioning will be categorized as a Type III or Type IV decommissioning

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<sup>3</sup>Licensees using small quantities of  $^{14}\text{C}$  or  $^3\text{H}$  may be decommissioned under Type II or Type III, depending on the total activity of  $^{14}\text{C}$  or  $^3\text{H}$  possessed under the license, and the authorized use of the radioactive material. LR/PMS should contact DWM/NMSS for guidance on which decommissioning Type is appropriate for their particular situation



based on the complexity of the decommissioning and the NRC staff actions required to comply with NEPA.

Facilities decommissioned under Type III would have used licensed material in a manner resulting in: releases into the environment; activation of adjacent materials or persistent contamination of work areas. Type III decommissioning would include licensees that:

1. Qualify for a categorical exclusion under 10 CFR 51.22 (c); and
2. Will decommission facilities in accordance with NRC's criteria for unrestricted use.

Type III decommissioning would always involve the development and submission of a DP by the licensee (including characterization, financial assurance, health and safety, survey plans, etc.). NRC staff would notice the receipt of the DP in the Federal Register, and review and approve the DP prior to commencement of decommissioning activities by the licensee. NRC staff would also provide the public with the opportunity to comment on the DP prior to approval. Review of the DP would be documented using a checklist. Approval of the DP would typically be done as a license amendment that would incorporate the DP as part of the license. Upon NRC approval of the DP, the licensee or responsible party would perform the decommissioning, including a FSS. Based on the licensee's prior performance, NRC may conduct a confirmatory survey to ensure that the site meets NRC's criteria for unrestricted use. NRC staff should refer to Section 10 of the NMSS Decommissioning Handbook for the procedures to be followed in decommissioning facilities under Type III.

#### 06.01.04 Type IV Review

Facilities decommissioned under Type IV would have used licensed material in a manner that has resulted in its release into the environment, activated adjacent materials or resulted in persistent contamination of work areas. Type IV decommissioning would include licensees that:

1. Would not qualify for a categorical exclusion under 10 CFR 51.22 (c); or
2. Intend to decommission facilities such that residual radioactive material may remain at the site in excess of the levels specified in NRC's criteria for unrestricted use.

Type IV decommissioning would always involve the development and submission of a DP by the licensee (including characterization, financial assurance, health and safety, survey plans, etc.). NRC staff would notice the receipt of the DP in the Federal Register, and review and approve the DP prior to commencement of decommissioning activities by the licensee. NRC staff would also provide the public with the opportunity to comment on the DP prior to approval. Review of the DP would be documented using a

SER. Approval of the DP would be done as a license amendment which would incorporate the DP as part of the license. In addition to the review of the DP documented in the SER, approval of the licensee's amendment request would be supported by an EA and, if appropriate, a FONSI. If the EA results in a determination that the environment would be impacted by the decommissioning, NRC staff will document this impact in an EIS.

Upon NRC approval of the DP, the licensee or responsible party would perform the decommissioning, including a FSS. NRC staff would generally conduct a confirmatory survey to ensure that the site meets NRC's criteria for license termination. NRC staff should refer to Section 11 of the NMSS Decommissioning Handbook for the procedures to be followed in decommissioning facilities under Type IV.

06.02 Decommissioning Plans. The objective of the DP is to describe the activities and procedures that a licensee intends to undertake to remove residual radioactive material attributable to licensed activities at the facility to levels that meet NRC criteria in sufficient detail to allow NRC staff determine whether decontamination of the facility can be accomplished safely. To the extent that licensed material is mingled with elevated (i.e., above background levels) naturally occurring radioactive material (NORM) the elevated NORM is also remediated in decommissioning. NRC regulations at 10 CFR Parts 30, 40, 70, and 72 require that certain information be provided by licensees in the DP. The information that licensees are required to include in the DP is summarized below. This information is discussed in detail in the NMSS Decommissioning Handbook.

#### 06.02.01 Content of Decommissioning Plans

NRC regulations at 10 CFR 30.36(f)(4)(ii) and (iii), 40.42(f)(4)(ii) and (iii), 70.38(f)(4)(ii) and (iii), require that DPs contain "...a description of the planned decommissioning activities" and "...a description of the methods used to ensure protection of workers and the environment against radiation hazards during decommissioning." NRC regulations at 10 CFR 72.54(f)(2), (3) and (6) require that DPs contain "...the choice of the alternative for decommissioning with a description of the activities involved", "...a description of the controls and limits on procedures and equipment to protect occupational and public health and safety" and "...a description of technical specifications and quality assurance provisions in place during decommissioning." Generally, this information is developed by the licensee after determining the radiological status of its facility. The DP is submitted to NRC for review and approval as a license amendment request. NRC staff should refer to Section 11 of the NMSS Decommissioning Handbook to determine the information that should be included in the decommissioning plans, as well as the procedures for reviewing the plan.

#### 06.02.02 Site Characterization

NRC requirements for decommissioning under 10 CFR 30.36(f)(4)(i), 40.42(f)(4)(i), 70.38(f)(4)(i), and 72.54(f)(1), require that proposed DPs include "...a description of the conditions of the site or separate building or outdoor area sufficient to evaluate the acceptability of the plan." Licensees can develop this information using institutional knowledge about radioactive material use at their facility, by performing a site characterization survey, or by a combination of these methods. Some licensees may require heightened attention by NRC staff during characterization planning. For these licensees it may be appropriate for NRC staff to request submission of site characterization plans or reports or to meet with the licensee prior to, or during, site characterization. The NRC staff should refer to Section 12 of the Decommissioning Handbook for information on the development of site characterization information, as well as the criteria for requesting early submission of site characterization information by licensees.

#### 06.02.03 Financial Assurance for Decommissioning

NRC regulations at 10 CFR 30.36(f)(4)(iv), 40.42(f)(4)(iv), and 70.38(f)(4)(iv) require that DPs contain "...an updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning and a plan for assuring the availability of adequate funds for completion of decommissioning." NRC regulations at 10 CFR 72.54(f)(5) also require Independent Spent Fuel Storage Installations to provide this information, along with information on a means to adjust cost estimates and funding levels over any storage or surveillance period. This information is typically presented to NRC for review and approval in an individual license application as the Decommissioning Funding Plan or Certificate of Financial Assurance. This information is updated in the DP. NRC staff should refer to Section 14 of the NMSS Decommissioning Handbook for information on financial assurance for decommissioning and the procedures to be followed to review the licensee's financial assurance mechanism.

#### 06.02.04 Final Status Survey Plans

Licensees wishing to terminate their licenses must demonstrate to NRC that residual radioactive material at their facility attributable to past licensed operations does not exceed NRC criteria for release of the facility. NRC regulations at 10 CFR 30.36(f)(4)(iv), 40.42(f)(4)(iv), 70.38(f)(4)(iv) and 72.54(f)(4) require that all DPs contain a description of the planned final radiation survey to demonstrate that the facility meets NRC's criteria for release and termination of the license. In addition, NRC regulations at 10 CFR 30.36(i)(2), 40.42(i)(2), 70.38(i)(2) and 72.54(k)(2) describe the information that must be submitted to NRC to support a demonstration that a licensed facility is suitable for release from regulatory control. NRC staff should refer to Section 16 of the NMSS Decommissioning



Handbook to determine what information should be presented in Final Status Survey Plans and Reports.

#### 06.03. Inspections During Decommissioning

Manual Chapter 2602, "Decommissioning Inspection Program for Fuel Cycle Facilities and Materials Licensees" establishes the inspection program for fuel cycle and materials licensees undergoing decommissioning. NRC has developed Inspection Procedure 87104 "Decommissioning Inspection Procedure for Materials Licensees" and Inspection Procedure 88104

"Decommissioning Inspection Procedure for Fuel Cycle Facilities." These inspections should confirm safe performance of decommissioning, including checks of the quality of the licensee's final survey. All NRC personnel implementing the decommissioning inspection program shall use the guidance identified in MC-2602 and the Decommissioning Inspection Procedures.

#### 06.04. Confirmatory Surveys

After acceptance of the licensee's final survey report, NRC may conduct a confirmatory survey. Inspection Procedure 83890 discusses the procedures to be followed to determine whether a confirmatory survey is required at a licensed facility. Inspection Procedure 83890 also summarizes the procedures to be followed to perform closeout inspections and confirmatory surveys. The confirmatory survey develops radiological data of the same type as that presented by the licensee, but is usually limited in scope to spot-checking conditions at selected site locations, comparing findings with those of the licensee, and performing independent evaluations of the data developed by the two surveys. NRC uses the report of this survey in supporting a decision on the licensee's application to terminate a license and release the site. The confirmatory survey is not intended nor designed to duplicate or augment the licensee's FSS. NRC's regulations do not include specific requirements for the confirmatory survey.

Facilities decommissioned under Type III will require a confirmatory survey and a closeout inspection, unless inspections by NRC during the licensee's FSS confirm that the licensee's survey will be of sufficient quality to demonstrate that the facility meets NRC criteria for termination of the license. NRC staff shall assign higher priority for conducting confirmatory surveys at sites that may pose a greater potential threat to the public health and safety if not remediated in accordance with NRC criteria. This approach would allow the release of some facilities from regulatory control based solely on past operations and performance, the staff's confidence that the facility was adequately remediated by the licensee, and a closeout inspection that does not indicate that additional issues remain unresolved at the facility. Facilities decommissioned under Type IV generally will require a confirmatory survey and closeout inspection by NRC staff.

NRC staff should refer to Section 17 of the NMSS Decommissioning Handbook for information and procedures to be followed in developing Confirmatory Surveys.

#### 06.05 Partial Facility Decommissioning

In most instances a licensee will request termination of its license with the intent of releasing the entire site from regulatory control. However, in some instances a licensee may request that only a portion of its facility be removed from the license. NRC requirements at 10 CFR 30.36(d)(1-4), 40.42(d)(1-4), 70.38(d)(1-4), and 72.54(d)(1-3) describe the conditions under which a licensed facility would be required to commence decommissioning operations, which would also be applicable to those instances where a licensee ceases operations at a portion of its facility. 10 CFR 30.35(g), 40.36(f), 70.25(g) and 72.30(d) describe the requirements for the maintenance of records pertaining to decommissioning licensed facilities which would also apply to the decommissioning of a portion of a licensed facility.

Generally, release of a portion of the licensed facility for unrestricted use is accomplished in the same manner as the release of the entire site or facility (i.e. by the licensee developing a DP, as required, that includes site characterization information and descriptions of remedial activities; performing the remedial activities; and demonstrating that the site meets NRC's current criteria for release). However, when completed the decommissioned portion of the facility will be released via amendment to the license, rather than termination of the license.

At facilities possessing broad scope licenses, radioactive material usage may be terminated and resumed at separate locations (e.g., individual laboratories within a building) at the facility numerous times during the active phase of the license. For this type of decommissioning, the licensee is not required to notify NRC as described in 10 CFR 30.36(d), as long as the licensee has not decided to permanently cease principal activities at the entire site or in any separate building. Also, because of the broad-scope nature of the license and the limited scope of the decommissioning, the licensee would not be required to submit a DP as described in 10 CFR 30.36(f)(1) and would not request an amendment to its license to describe this change in areas of use. As such, the licensee would only be required to maintain records of the decommissioning for review by NRC per 10 CFR 30.35(g).

The licensee's decommissioning and release of these separate locations for unrestricted use must be accomplished and documented in a manner similar to that described in this manual chapter for licensee's facilities which are subject to NRC review and approval prior to release for unrestricted use. To ensure that broad scope licensees have adequately decommissioned these separate locations, inspectors must perform a detailed review of the licensee's decommissioning records during each inspection and should consider performing confirmatory measurements in those



separate facilities the licensee has released for unrestricted use.

NRC staff should refer to Section 18 of the NMSS Decommissioning Handbook for the procedures to be followed to release a portion of a licensed facility for unrestricted use.

#### 06.06 License Termination

The final action required by the licensee after it has completed remediation and adequately demonstrated that the facility is suitable for release in accordance with NRC's requirements is the submission of NRC Form 314. If the licensee has satisfied all of the conditions for remediating its site, NRC staff terminates the license for the site. For sites listed on the SDMP and other non-routine sites, NRC should inform the State agency that may have jurisdiction over any hazardous chemical contamination and the U.S. Environmental Protection Agency about the intent to terminate the license. In addition, the termination is intended as final agency action and should include appropriate language in the termination letter to reflect this intent. NRC staff should refer to Section 20 of the NMSS Decommissioning Handbook for the procedures to be followed to terminate the license.

#### 06.07 Formerly Licensed sites

In February 1995 NRC issued Temporary Instruction (TI) 2800/026, which outlines the procedures staff shall follow to verify the status of formerly licensed sites for which there is inadequate documentation in the docket file to demonstrate that they were properly decommissioned. Staff should refer to TI 2800/026 and Section 21 of the NMSS Decommissioning Handbook for guidance on the appropriate procedures to be followed to assess the status of formerly licensed sites.