

1.0 Introduction

1.1 Purpose and Need for This Supplement

This document supplements the *Final Generic Environmental Impact Statement (GEIS) on Decommissioning of Nuclear Facilities* (NRC 1988), issued in 1988 (NUREG-0586, referred to hereafter as the 1988 GEIS.) This Supplement updates information provided in the 1988 GEIS by considering decommissioning experience gained since 1988 and changes in U.S. Nuclear Regulatory Commission (NRC) regulations and, where appropriate, other agency regulations. The NRC has adopted the following definition of the purpose and need of this Supplement:

The purpose and need are to provide an analysis of environmental impacts from decommissioning activities that can be treated generically so that decommissioning activities for commercial nuclear power reactors conducted at specific sites will be bounded, to the extent practicable, by this and appropriate previously issued environmental impact statements.

This Supplement is intended to be used to evaluate environmental impacts during the decommissioning of nuclear power facilities as residual radioactivity at the site is reduced to levels that allow for termination of the NRC license. This Supplement can be considered a stand-alone document such that readers should not need to refer back to the 1988 GEIS. The environmental impacts described in this Supplement supercede those described in the 1988 GEIS.

The NRC elected to supplement the 1988 GEIS:

- (1) to further the purposes of the National Environmental Policy Act (NEPA)
- (2) to update the information in the 1988 GEIS
- (3) to provide additional information to the public on decommissioning activities
- (4) to establish an envelope of environmental impacts associated with decommissioning activities.

Unlike the 1988 GEIS, this Supplement covers only reactor facilities licensed by the NRC for commercial power production. It updates the sections of the 1988 GEIS relating to pressurized water reactors, boiling water reactors, and multiple reactor stations. It goes beyond the 1988 GEIS and considers the permanently shut down high-temperature gas-cooled reactors and fast breeder reactors. It does not cover research and test reactors or power reactor facilities that

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1 have been involved in accidents. It also does not cover other types of fuel-cycle facilities, such
2 as fuel-reprocessing plants or small mixed oxide fuel-fabrication plants.

3
4 This Supplement incorporates updated information, regulations, and analyses. Since the 1988
5 GEIS was written, the NRC and the industry have gained over 200 facility-years worth of
6 additional decommissioning experience. Currently, there are 19 nuclear power reactor facilities
7 in the decommissioning process. This includes nine that permanently ceased operations after
8 the NRC published the 1988 GEIS. Since the 1988 GEIS, three facilities have completed
9 decommissioning and terminated their licenses: Pathfinder, Shoreham, and Fort St. Vrain.
10 This Supplement addresses new decommissioning technologies and approaches that the 1988
11 GEIS did not address. Also, the decommissioning regulations have changed since the 1988
12 GEIS.
13

14 **1.2 Process Used to Determine Scope of This Supplement**

15
16 The content of this Supplement was initially defined by the scope of the 1988 GEIS and was
17 modified based on current decommissioning regulations, inputs from the scoping process and
18 the outcome of meetings between the NRC, the U.S. Environmental Protection Agency (EPA),
19 and the Council on Environmental Quality (CEQ).
20

21 Four public scoping meetings were held between April and June 2000 as part of the scoping
22 process. During the meetings, the NRC outlined the GEIS revision process and accepted
23 comments regarding the scope of this Supplement. In addition to comments obtained during
24 the scoping meetings, the NRC received 12 letters from industry groups, other interested
25 organizations, and private citizens. A total of 397 comments were provided during the scoping
26 process. The staff reviewed the comments and categorized them as either relevant to this
27 Supplement or outside of its intended scope. The staff prepared and issued a scoping
28 summary report on April 17, 2001 (NRC 2001), that summarizes the comments and NRC
29 responses to the comments. Appendix A is an extraction of comments from the scoping
30 summary report that were considered to be within the scope of the environmental review.
31 Appendix B is reserved for the disposition of comments on this draft report. In addition to the
32 scoping meetings, meetings were held with EPA and CEQ between February and November
33 2000 to obtain input on the scope of the environmental review.
34

35 Site visits were conducted by the NRC staff and their contractor at six nuclear reactor facilities
36 that are in various stages of decommissioning. The site visits were conducted to obtain
37 information and to familiarize the NRC team with the current types of activities conducted and
38 the resulting impacts during decommissioning. In addition to the site visits, the Nuclear Energy
39 Institute arranged access to additional site-specific decommissioning data. In addition to the six
40 sites visited, data was received for three other nuclear power reactor facilities.

Information used in this report was also obtained from docketed material, such as post-shutdown decommissioning activity reports (PSDARs), effluent release reports, license termination plans, and decommissioning funding plans.

1.3 Scope of This Supplement

Except for decommissioning planning activities, this Supplement considers only activities that occur following certification that fuel has been removed from the reactor. Figure 1-1 illustrates the decommissioning process. Licensee decommissioning activities described by the top half of the timeline are discussed in this chapter. Regulatory activities summarized by the lower part of the timeline are discussed in Chapter 2. This section discusses licensee decommissioning activities that are within scope and also explains why some activities and impacts are not in scope for this Supplement. Table 1-1 briefly lists decommissioning activities that are within and outside the scope of this Supplement. Additional discussion of the out-of-scope activities is provided in Appendix D.

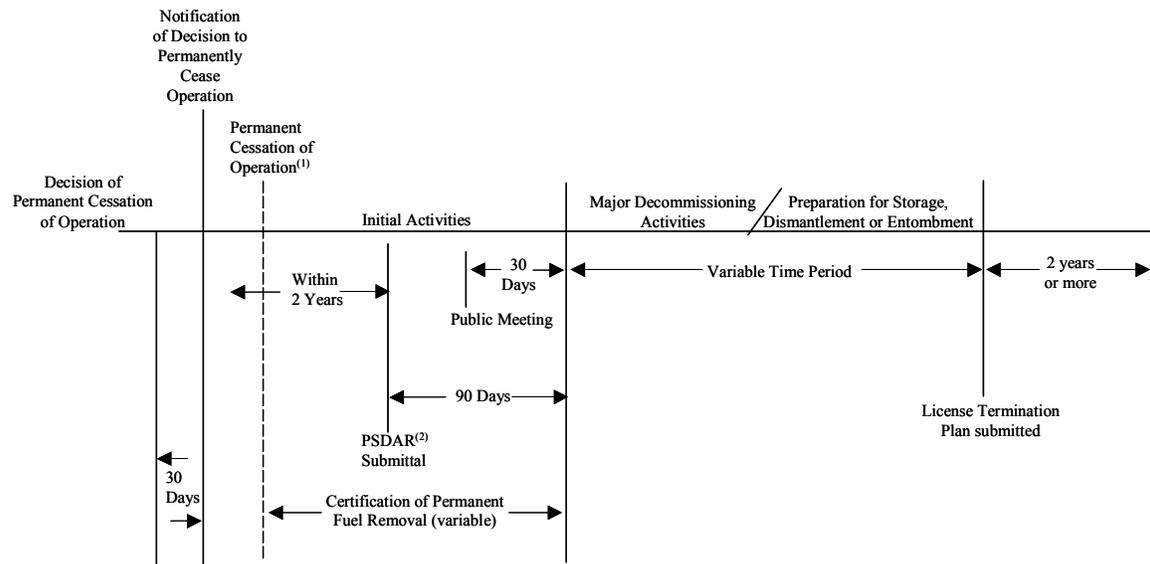


Figure 1-1. Decommissioning Timeline

- (1) The cessation of operations may occur before, concurrent with, or following the certification to permanently cease operations.
- (2) The PSDAR may be submitted before permanent cessation of operations.

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Table 1-1. Activities and Impacts Within or Outside the Scope of This Supplement

In Scope	
•	Activities performed to remove the facility from service from the time that the licensee certifies that the facility has permanently ceased operations
•	Activities (and the resulting impacts) performed in support of radiological decommissioning, including decontamination and dismantlement of radioactive structures and any activities required to support the decontamination and dismantlement process
•	Activities performed in support of dismantlement of nonradiological structures, systems, and components (SSCs) required for the operation of the reactor, such as diesel generator buildings and cooling towers
•	Activities performed up to license termination and their resulting impacts as provided in the definition of decommissioning. Nonradiological impacts occurring after license termination from activities conducted during decommissioning
•	Activities related to release of the facility
•	Human health impacts from radiological and nonradiological decommissioning activities
•	Activities related to preparing the facility for entombment
Out of Scope^(a)	
•	Activities and the resulting impacts (other than planning activities) that are performed before permanent cessation of operation is certified
•	Radiological impacts following license termination
•	Activities (and the resulting impacts) performed to dismantle structures on the site that are not radiologically contaminated and were not required for operation of the reactor (e.g., training building and administration building)
•	Activities performed to support installation of alternate energy-generating facilities during or following the decommissioning process
•	Site restoration activities performed during or after the decommissioning process
•	Activities (and their impacts) performed after license termination, such as <ul style="list-style-type: none">- any additional non-NRC required monitoring to evaluate radiological impacts- site restoration- continued use of site for power production or other activities
•	Activities performed at facilities that are separately licensed or regulated <ul style="list-style-type: none">- independent spent fuel storage installation (ISFSI) construction, maintenance, or decommissioning- Spent fuel storage,^(b) maintenance, and disposal on or away from a reactor location- Low-level waste (LLW) disposal at a licensed LLW site or treatment at compactor facilities
•	Activities to install engineered barriers and institutional controls for restricted release
•	Public perceptions and psychological impacts
•	Activities at facilities that have been permanently shutdown by a major accident
•	Issues related to the ENTOMB option after the facility begins the entombment period
(a)	A detailed discussion of the reasons for determining that activities are out of scope can be found in Appendix D.
(b)	As discussed in the text, the staff relies on the Waste Confidence Decision Review (54 FR 39767 and 64 FR 68005) but has chosen to include information related to the storage and maintenance of fuel in a spent fuel pool for completeness in this Supplement.

1 Impacts related to the decision to permanently cease operations are outside the scope of this
2 Supplement. This includes impacts that result directly and immediately from the act of
3 permanently ceasing operations, regardless of when or why the decision was made. For
4 example, when a reactor ceases operation, the flow of warmer water into the canal, lake, or
5 river that receives the plant's thermal discharges is stopped, and this may impact the organisms
6 in the vicinity of the thermal outfall. However, this impact is not within the scope of this
7 Supplement because it is essentially a restoration of the existing conditions.

8
9 The licensee may declare or certify the date for permanent cessation of operations prior to the
10 end of the license term and while still operating. In such cases, the decommissioning planning
11 activities prior to shutdown and activities and impacts that occur following the actual shutdown
12 of the facility are within the scope of this Supplement. In some circumstances, the licensee
13 may not operate the facility for a period of many years without certifying that they have
14 permanently ceased power operations. In these cases, the activities occurring before the
15 certification is completed would be considered part of the operational phase of the facility and
16 would be within the scope of the site-specific environmental impact statement (EIS) that covers
17 reactor operations but are outside the scope of this Supplement.

18
19 The NRC definition for *decommission* in 10 CFR 50.2 is "to remove a facility or site safely from
20 service and reduce residual radioactivity to a level that permits (1) Release of the property for
21 unrestricted use and termination of the license; or (2) Release of the property under restricted
22 conditions and termination of the license." This Supplement is not limited only to activities
23 directly related to the removal of radioactive material from facilities or that must be performed to
24 facilitate removal of contaminated structures, systems, and components (SSCs). The staff has
25 included activities and impacts related to removing uncontaminated SSCs, that were required
26 for reactor operation such as the intake structure or cooling towers. Including uncontaminated
27 SSCs in this Supplement is consistent with an expectation under NEPA that all impacts
28 associated with an activity and that public concerns about the scope of the review be
29 considered.

30
31 Various activities that are performed in conjunction with decommissioning are not considered
32 within the scope of this Supplement, but are reviewed and regulated by the NRC under other
33 licenses. These activities include

- 34
35
- 36 • independent spent fuel storage installation (ISFSI) construction, maintenance, and
37 decommissioning – An ISFSI can be operated and decommissioned either under the same
38 license that is used for the operating or decommissioning facility called a general license
39 under 10 CFR Part 50, or under a specific license under 10 CFR Part 72. If a licensee
40 chose to operate the ISFSI under a Part 50 license, they could, by way of a license
amendment request, change the ISFSI to a Part 72 license, thus allowing termination of the

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1 Part 50 license and the end of the decommissioning process. The NRC staff would also be
2 required to conduct an environmental assessment of the licensee's proposal.

- 3
4 • spent fuel storage and maintenance – The Commission has independently, in a separate
5 proceeding (the Waste Confidence Proceeding), made a finding that there is
6
7 reasonable assurance that, if necessary, spent fuel generated in any reactor can be
8 stored safely and without significant environmental impacts for at least 30 years beyond
9 the licensed life for operation (which may include the term of a revised license) of that
10 reactor at its spent fuel storage basin, or at either onsite or offsite independent spent
11 fuel storage installations. (54 FR 39767)

12
13 The Commission has committed to review this finding at least every 10 years. In its most
14 recent review, the Commission concluded that experience and developments since 1990
15 were not such that a comprehensive review of the Waste Confidence Decision was
16 necessary at that time (64 FR 68005). Accordingly, the Commission reaffirmed its findings
17 of insignificant environmental impacts cited above. This finding is codified in the
18 Commission's regulations at 10 CFR 51.23(a). The staff relies on the Waste Confidence
19 Rule, but has elected to include in this Supplement information related to the storage and
20 maintenance of fuel in a spent fuel pool for completeness.

- 21
22 • spent fuel transport and disposal away from the reactor location – Transportation of spent
23 fuel and other high-level nuclear wastes is governed by regulations in 10 CFR Part 71,
24 "Packaging and Transportation of Radioactive Material." Disposal of spent fuel and high-
25 level wastes are governed by the Nuclear Waste Policy Act (NWPA) of 1982, as amended,
26 which defined the goals and structure of a program for permanent, deep geologic
27 repositories for the disposal of high-level radioactive waste and nonreprocessed spent fuel.
28 Under this Act, the DOE is responsible for developing permanent disposal capacity for spent
29 fuel and other high-level nuclear wastes. Title 10 CFR Part 60 contains rules governing the
30 licensing to receive and possess source, special nuclear, and by-product material at a
31 geological repository operations area that is sited, constructed, or operated in accordance
32 with the NWPA. However, the Commission proposes to supercede the generic criteria in
33 Part 60 for disposal at a geological repository with specific criteria in a proposed 10 CFR
34 Part 63 issued on February 22, 1999 (64 FR 8640).
 - 35
36 • LLW disposal at a licensed LLW site or treatment of LLW at compactor facilities –
37 Regulations related to LLW disposal are in 10 CFR Part 61 and 10 CFR Part 20, Subpart K.
38 A final GEIS supporting the regulations in 10 CFR Part 61, "Final Generic Environmental
39 Impact Statement for 10 CFR Part 61" was published as NUREG-0945 (NRC 1982).
- 40

1 A further description of these activities and the basis for not including them in the scope of this
2 supplement is in Appendix D.

3
4 The decommissioning process continues until the licensee requests termination of the license
5 and demonstrates that radioactive material has been removed to levels that permit termination
6 of the NRC license. Once the NRC determines that the decommissioning is completed, the
7 license is terminated. At that point, the NRC no longer has regulatory authority over the site,
8 and the owner of the site is no longer subject to NRC regulations. As a result, activities
9 performed after license termination and the resulting impacts are outside the scope of this
10 Supplement. These activities may include any non-NRC required monitoring, site restoration
11 (grading, planting of vegetation, etc.), continued dismantlement or continued use of the site for
12 activities such as power production using natural gas, oil, or coal.

13
14 Any potential radiological impacts following license termination that are related to activities
15 performed during decommissioning are not considered in this Supplement. Such impacts are
16 covered by the Generic Environmental Impact Statement in Support of Rulemaking on
17 Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities, NUREG-1496
18 (NRC 1997).

19
20 Any potential non-radiological impacts resulting from decommissioning and occurring after
21 termination of the license are considered within the scope of this Supplement. On-site disposal
22 has been proposed by the industry as method to dispose of slightly contaminated building
23 rubble provided that the waste is buried in such a manner as to meet the site release criteria of
24 10 CFR Part 20, Subpart E. This concept has been referred to as Rubblization. On
25 February 14, 2000, the staff informed the Commission of licensee interest in this method and
26 the staff's intent to address Rubblization in this Supplement (NRC 2000). The staff has
27 determined that Rubblization, or on-site disposal of slightly contaminated material, would
28 require a site-specific analysis and the radiological aspects of the activity would be addressed
29 at the time the license termination plan is submitted. The non-radiological impacts, both
30 occurring during the decommissioning period (e.g. noise, dust, land disturbance), and the long-
31 term impacts occurring after the decommissioning activities are completed (e.g. concrete
32 leaching into the groundwater) can be evaluated generically and are included in the evaluation
33 of each of the applicable environmental issues in Section 4 of this document.

34
35 Public perceptions and psychological impacts related to the risk of a radiological accident
36 during decommissioning **are** not addressed in the 1988 GEIS and are not addressed in this
37 Supplement. The Supreme Court stated in *Metropolitan Edison Co. v. People Against Nuclear*
38 *Energy* that such psychological effects or impacts raised policy questions that fell outside of
39 NEPA. This court case involved an organization of residents living in the area of Three Mile
40 Island, People Against Nuclear Energy (PANE), that claimed the NRC should consider, as part

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1 of an EIS, the severe psychological stress caused to its members by the restart of Three Mile
2 Island, Unit 1, after the accident at Three Mile Island, Unit 2. However, in Metropolitan Edison
3 Co., et al v. People Against Nuclear Energy (1983), the Supreme Court read NEPA to require

4
5 a reasonably close causal relationship between a change in the physical
6 environment and the effect at issue a risk of an accident is not an effect on the
7 physical environment We believe that the element of risk lengthens the causal
8 chain beyond the reach of NEPA.
9

10 The decommissioning activities following shutdown of a facility after a major accident resulting
11 in significant contamination of the site are outside the scope of this Supplement. For most
12 types of accidents, decommissioning would be treated on a site-specific basis and, therefore,
13 cannot be considered in a generic sense.
14

15 **1.4 Categories for Environmental Impacts and Extent of** 16 **Issues**

17
18 In the analysis of potential issues in decommissioning activities, two areas in particular were
19 found to benefit from categorization: (a) ranking the significance and severity of potential
20 environmental impacts for proposed decommissioning activities and (b) sorting potential issues
21 as either generic or site-specific.
22

23 **1.4.1 Levels of Significance of Environmental Impacts**

24
25 The NRC's standard of significance was established using the CEQ terminology for
26 "significantly" (40 CFR 1508.27, which considers "context" and "intensity"). Using the CEQ
27 terminology, the NRC established three significance levels: SMALL, MODERATE, or LARGE.
28

29 SMALL – Environmental impacts are not detectable or are so minor that they will neither
30 destabilize nor noticeably alter any important attribute of the resource. For the purposes of
31 assessing radiological impacts in this Supplement, the NRC has concluded that those
32 impacts that do not exceed permissible levels in the Commission's regulations are
33 considered small.
34

35 MODERATE – Environmental impacts are sufficient to alter noticeably, but not to destabilize,
36 important attributes of the resource.
37

38 LARGE – Environmental impacts are clearly noticeable and are sufficient to destabilize
39 important attributes of the resource.

1 The discussion of each environmental issue in this Supplement includes an explanation of how
2 the significance level was determined. In determining a significance level, the NRC staff
3 assumed that ongoing mitigation measures would continue (including those mitigation
4 measures implemented during plant construction and/or operation) during decommissioning, as
5 appropriate. Benefits of additional mitigation measures during or after decommissioning are not
6 considered in determining significance levels.

8 **1.4.2 Regulatory Distinction of Generic and Site-Specific Approaches**

9
10 In addition to determining the significance of environmental impacts, this Supplement includes a
11 determination of whether the analysis of the environmental issue could be applied to all plants,
12 and whether additional mitigation measures would be warranted. An environmental issue may
13 be assigned to one of two categories (generic or site-specific) described below.

- 14
15 • Generic – For each environmental issue, the analysis reported in this Supplement shows the
16 following:

- 17
18 (1) Environmental impacts associated with the issue have been determined to apply either
19 to all plants, or for some issues to plants having a specific size, specific location, or
20 having a specific type of cooling system or other site characteristics, and
21
- 22 (2) A single significance level (i.e., SMALL, MODERATE, or LARGE) has been assigned to
23 the impacts, and
24
- 25 (3) Mitigation of adverse impacts associated with the issue has been considered in the
26 analysis, and it has been determined that additional plant-specific mitigation measures
27 are not likely to be sufficiently beneficial to warrant implementation.

- 28
29 • Site-specific – For each environmental issue, the analysis reported in this Supplement has
30 shown that one or more of the generic criteria was not met; therefore, additional plant-
31 specific review is required.

32 33 **1.5 Uses of This Supplement**

34
35 This Supplement can be used by the public to understand the decommissioning process, the
36 activities performed during decommissioning, and the potential environmental impacts resulting
37 from these activities. This Supplement identifies activities that can be bounded by a generic
38 evaluation. It also identifies the decommissioning activities and associated environmental
39 issues that will likely require site-specific analysis before performing a decommissioning activity.
40

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1 Licensees can rely on the information in this Supplement as a basis for meeting the
2 requirements in 10 CFR 50.82(a)(6)(ii). This requirement states that the licensee must not
3 perform any decommissioning activity that causes any significant environmental impact not
4 previously reviewed. Prior to conducting a decommissioning activity, the licensee must make a
5 determination that the resulting environmental impacts fall within the bounds of this Supplement
6 or of another EIS related to its facility. When finalized, licensees are expected to reflect the
7 environmental impacts described in this Supplement rather than those in the 1988 GEIS. For
8 any decommissioning activity that does not meet these conditions, the regulations prohibit the
9 licensee from undertaking the activity until it performs a site-specific analysis of the activity.
10 Depending on the results of the site-specific evaluation, the staff may determine that it is
11 appropriate to consult with another agency about the potential impacts. Such agencies could
12 include the U.S. Fish and Wildlife Service or a State Historic Preservation Office. If the activity
13 would result in an impact that is outside the bounds of the GEIS or other environmental
14 assessments, the licensee would be required to submit a license-amendment request. The
15 NRC staff periodically inspects the licensee's procedures and documentation to ensure that a
16 proper environmental review is part of the screening criteria used for proposed changes to the
17 facility.

18
19 In addition to the NRC staff's review of the licensee's procedures and documentation, there are
20 two points during the decommissioning process when the licensee performs an evaluation of
21 environmental impacts. The first evaluation occurs when the licensee must submit a PSDAR to
22 the NRC (within two years following permanent cessation of operation). The PSDAR must
23 include a discussion that provides the reasons for concluding that the environmental impacts
24 associated with the licensee's planned site-specific decommissioning activities will be bounded
25 by previously approved EISs, including this Supplement. If the licensee identifies environmental
26 impacts that are not bounded by NEPA assessments, the licensee must address the impacts in
27 a request for a license amendment regarding the activities. The licensee must also submit a
28 supplement to its environmental report that describes and evaluates the additional impacts.
29 The NRC will review the supplement to the environmental report in conjunction with its review of
30 the license-amendment request.

31
32 The second evaluation is near the end of decommissioning at the time when the licensee
33 submits an application for license termination. In accordance with 10 CFR 50.82(a)(9), all
34 licensees must submit a license termination plan (LTP) at least 2 years before the anticipated
35 termination date of the license. The LTP must be a supplement to the Final Safety Analysis
36 Report or its equivalent for the facility and is submitted as a license amendment. The NRC
37 requires an environmental review as part of the review of the license-amendment request.
38 Thus, the LTP must include a supplement to the environmental report that describes any new
39 information or significant environmental change associated with the licensee's proposed

1 termination activities. The NRC staff will also rely upon this supplement as a basis for deter-
2 mining if anticipated decommissioning impacts require an additional review.
3

4 **1.6 Development of This Supplement**

5
6 The requirements in 10 CFR Part 51 were followed for the development of this Supplement.
7 This included conducting scoping meetings and obtaining public comments (see Appendix A).
8 From these meetings and meetings with other appropriate government agencies, the staff
9 defined the scope of this Supplement (see Sections 1.2 and 1.3). During the scoping process,
10 the staff developed an evaluation process for determining the environmental impacts from
11 decommissioning. Section 4.2 provides additional discussion of the process and Appendix E
12 provides a detailed description of the analysis used to identify the environmental impacts from
13 decommissioning. The evaluation process involved determining the specific activities that occur
14 during decommissioning and obtaining data from site visits and from an information request to
15 decommissioning plants that was related to the impact of these activities at currently
16 decommissioning facilities. The data obtained from the decommissioning sites were analyzed
17 and then evaluated against a list of variables that defined the parameters for plants that are
18 currently operating but which will one day be decommissioned. This evaluation resulted in a
19 range of impacts for each environmental issue that may be used for comparison by licensees
20 that are or will be decommissioning their facilities.
21

22 **1.7 Parts of This Supplement**

23
24 Chapter 2 provides background, describing the basis for the current regulations and
25 summarizing the regulations. Chapter 3 describes the types of plants covered by this
26 Supplement, which includes permanently shutdown reactor facilities as well as operating
27 facilities that will eventually cease power operations. Chapter 3 also describes the location and
28 types of buildings on the sites, the systems that may still be active after permanent shutdown,
29 and changes in effluents after permanent shutdown. Chapter 4 describes activities conducted
30 during the decommissioning process and impacts that could arise from these activities. The
31 analysis of the impacts is based on variables such as the option of decommissioning, location
32 of plant, type of plant, and timing of the activity. Chapter 5 discusses the “No Action” alternative
33 to decommissioning, which is the abandonment of the facility after the cessation of operations.
34 Chapter 6 contains the conclusions.
35

36 **1.8 References**

37
38 10 CFR 20. Code of Federal Regulations, Title 10, *Energy*, Part 20, “Standards for protection
39 against radiation.”

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1 10 CFR 50. Code of Federal Regulations, Title 10, *Energy*, Part 50, “Domestic licensing of
2 production and utilization facilities.”

3
4 10 CFR 51. Code of Federal Regulations, Title 10, *Energy*, Part 51, “Environmental protection
5 regulations for domestic licensing and related regulatory functions.”

6
7 10 CFR 60. Code of Federal Regulations, Title 10, *Energy*, Part 60, “Disposal of High-Level
8 Radioactive Wastes in Geologic Repositories.”

9
10 10 CFR 61. Code of Federal Regulations, Title 10, *Energy*, Part 61, “Licensing requirements
11 for land disposal of radioactive waste.

12
13 10 CFR 71. Code of Federal Regulations, Title 10, *Energy*, Part 71, “Packaging and
14 transportation of radioactive material.”

15
16 10 CFR 72. Code of Federal Regulations, Title 10, *Energy*, Part 72, “Licensing requirements
17 for the independent storage of spent nuclear fuel and high-level radioactive waste.”

18
19 40 CFR 1508. Code of Federal Regulations, Title 40, *Protection of the Environment*, Part 1508,
20 “Terminology and Index.”

21
22 54 FR 39767. “10 CFR Part 51 Waste Confidence Decision Review.” *Federal Register*.
23 September 28, 1989.

24
25 64 FR 8640. “10 CFR Parts 2, 19, 20, 21, 30, 40, 51, 60, 61, and 63 Disposal of High-Level
26 Radioactive Wastes in a Proposed Geologic Repository at Yucca Mountain, Nevada.” *Federal*
27 *Register*. February 22, 1999.

28
29 64 FR 68005. “Waste Confidence Decision Review.” *Federal Register*. December 6, 1999.

30
31 Metropolitan Edison Co., et al v. People Against Nuclear Energy, 460 U.S. 766, at 774-775.
32 1983.

33
34 National Environmental Policy Act (NEPA) of 1969, as amended, 42 USC 4321 et seq.

35
36 Nuclear Waste Policy Act of 1983, as amended, 42 USC 10.101 et seq.

37
38 U.S. Nuclear Regulatory Commission (NRC). 1982. *Final Generic Environmental Impact*
39 *Statement for 10 CFR Part 61*. NUREG-0945, NRC, Washington, D.C.

40

- 1 U.S. Nuclear Regulatory Commission (NRC). 1988. *Final Generic Environmental Impact*
2 *Statement on Decommissioning of Nuclear Facilities*. NUREG-0586, NRC, Washington, D.C.
3
- 4 U.S. Nuclear Regulatory Commission (NRC). 1997. *Final Generic Environmental Impact*
5 *Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-*
6 *Licensed Nuclear Facilities*. NUREG-1496, Vol. 1, NRC, Washington, D.C.
7
- 8 U.S. Nuclear Regulatory Commission (NRC). 2000. "SECY-00-0041 Use of Rubblized
9 Concrete Dismantlement to Address 10 CFR Part 20, Subpart E, Radiological Criteria for
10 License Termination." NRC, Washington, D.C.
11
- 12 U.S. Nuclear Regulatory Commission (NRC). 2001. Letter from U.S. NRC to Distribution:
13 "Subject: Issuance of a scoping summary report of comments received related to the intent to
14 develop a Supplement to NUREG-0586." Dated April 17, 2001.