

**Waste Confidence  
Generic Environmental Impact Statement  
Scoping Process**

**Summary Report**

**March 2013**



**U.S. Nuclear Regulatory Commission  
Rockville, Maryland**

ENCLOSURE

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## **A. The Waste Confidence Public Scoping Period**

### **A1. Introduction**

From October 25, 2012, through January 2, 2013, the U.S. Nuclear Regulatory Commission (the NRC or the staff) conducted an environmental scoping process for the Waste Confidence generic environmental impact statement (GEIS). During the scoping process, the NRC invited interested people and organizations to identify issues and provide recommendations to the agency on the development of a GEIS to support a proposed update to the Waste Confidence rule. The NRC's goal for conducting the scoping process was to define the scope of issues to be addressed in the analyses that will be included in the GEIS.

During the 70-day scoping period, interested people and organizations submitted hundreds of written comments, and many more statements were submitted orally at public meetings. This scoping summary report has been prepared to summarize what the NRC heard during the scoping process. Section A provides a summary of the determinations and conclusions reached during the NRC's environmental scoping process for the GEIS. Section B contains a summary of comments received during the public scoping period and the NRC's responses. Section C provides references cited throughout the report. Section D contains an alphabetized table that identifies the individuals providing comments, their affiliation if provided, and the Agencywide Documents Access and Management System (ADAMS) Accession number that can be used to locate the correspondence. Section E is a table listing comments on the NRC's 2011 long-term Waste Confidence pre-scoping document (NRC 2011a). A separate document, "Scoping Comments on the Waste Confidence Generic Environmental Impact Statement," is located in ADAMS under Accession No. ML13060A130. This document lists the Waste Confidence scoping comments, organized by comment category.

All documents associated with this scoping process, including comment documents, are available for public inspection in the NRC Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike, Rockville, MD 20852, or from ADAMS. The ADAMS Public Electronic Reading Room is accessible at <http://www.nrc.gov/reading-rm/adams.html>. Persons who encounter problems in accessing documents in ADAMS should contact the NRC's PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737 or by email at [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov).

### **A2. Background**

The U.S. Nuclear Regulatory Commission is preparing a GEIS to support an update to the Waste Confidence decision and rule. The Waste Confidence rulemaking represents the Commission's generic determination regarding the environmental impacts of the continued storage of spent nuclear fuel after the end of the licensed life for operations of a nuclear power plant and prior to ultimate disposal in a permanent repository (continued storage). This generic analysis is codified in 10 CFR § 51.23 and satisfies the NRC's National Environmental Policy Act (NEPA) obligations with respect to continued storage.

The Waste Confidence rulemaking was first completed in 1984. The rule was amended in 1990, reviewed in 1999, and amended again in 2010 (SRM-SECY-09-0090, under ADAMS Accession No. ML102580229, and 75 FR 81037, December 23, 2010). In 1984 and 1990 the continued storage period was 30 years, and in 2010 it was increased to 60 years.

In response to the 2010 rulemaking, the States of New York, New Jersey, Connecticut, and Vermont and several other parties challenged the Commission's NEPA analysis that supported the rule. On June 8, 2012, the D.C. Circuit Court of Appeals found that some aspects of the 2010 rulemaking did not satisfy the NRC's NEPA obligations and vacated and remanded the rule (*New York v. NRC*, 681 F.3d 471) (D.C. Cir. 2012). The court concluded that the Waste Confidence rulemaking is a major federal action necessitating either an environmental impact statement (EIS) or an environmental assessment (EA) that results in a Finding of No Significant Impact. The court also ruled that the NRC should have considered the potential environmental effects in the event a permanent repository for disposing of spent nuclear fuel is never built, and found other deficiencies with the NRC's consideration of leaks and fires involving spent fuel pools.

The Waste Confidence rule, though applicable only to the period after the licensed life of a reactor, is a part of the environmental analysis for agency decisions on the licensing and relicensing of nuclear reactors and independent spent fuel storage installations (ISFSIs). Prior to the court's ruling, environmental review documents for each of these licensing actions deferred to conclusions codified in the Waste Confidence rule to address the environmental impacts of continued storage. In response to the court's remand, the Commission decided to develop an EIS addressing continued storage, decided to develop a rule reflecting the results of the EIS, and determined that no final licenses (for reactors and ISFSIs) would be issued until the remand is appropriately addressed (Commission Order CLI-12-016) (NRC 2012a). The NRC is now undertaking a rulemaking effort to revise the Waste Confidence decision and rule to reflect the results of this EIS and to address the issues and deficiencies identified by the court.

### **A3. Generic Environmental Impact Statement**

The Waste Confidence rulemaking is the proposed federal action that is the subject of this NEPA analysis. To fulfill its responsibilities under NEPA, the NRC is preparing a generic environmental impact statement (GEIS), which will assess the environmental impacts of continued storage. The GEIS will also determine whether the environmental impacts associated with continued storage are the same or similar for all plants, and can be treated on a generic basis codified in a rule. The GEIS will provide the regulatory basis for the Waste Confidence rule.

The purpose and need for the proposed action is to develop and implement a regulatory approach that efficiently evaluates the environmental impacts of spent nuclear fuel after the licensed life for operation of a commercial nuclear reactor and prior to ultimate disposal. The GEIS will include an evaluation of the environmental impacts of the Waste Confidence rulemaking; the generic impact of the continued storage; the environmental impacts of

alternatives to the rulemaking, including the no-action alternative; and potential mitigation available for reducing or avoiding adverse impacts.

The NRC's methodology and approach to evaluating the environmental impacts of continued storage will follow the guidance in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs: Final Report" (NRC 2003), where appropriate.

The Waste Confidence GEIS will be prepared by NRC staff with contract support from the Center for Nuclear Waste Regulatory Analyses (CNWRA<sup>®</sup>). CNWRA is a technical division of the Southwest Research Institute<sup>®</sup> and was established in 1987 as a federally funded research and development center. CNWRA's technical areas of expertise include transportation of radioactive materials, storage and disposal of radioactive wastes, EAs, safety evaluations of nuclear fuel cycle facilities, and decommissioning of nuclear facilities. More information on CNWRA can be found at <http://www.swri.org/4org/d20/cnwra/home.htm>.

#### **A4. Scoping Process**

The first step in developing an EIS is to conduct a public scoping process. On October 25, 2012, the NRC published a Notice of Intent to prepare an EIS and conduct scoping in the *Federal Register*: "Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation" (77 FR 65137). The notice described the NRC's plan to prepare an EIS and conduct public scoping webcast meetings and webinars, and requested comments on the scope of the Waste Confidence GEIS. Through the notice, the NRC invited federal, tribal, state, and local governments; organizations; and members of the public to provide comments on the scope of the NRC's Waste Confidence GEIS. Comments could be submitted through January 2, 2013, via the federal rulemaking website ([www.Regulations.gov](http://www.Regulations.gov)) using Docket ID NRC-2012-0246, fax, or mail. Comments received after January 2, 2013, were considered and included in this scoping summary report as practicable.

The scoping process provided an opportunity for members of the public to identify issues and highlight concerns related to continued storage. The Notice of Intent (77 FR 65137) identified the following objectives of the scoping process:

- a. Determine the scope of the EIS and identify the significant issues to be analyzed in depth, including potential spent fuel storage scenarios for evaluation, such as availability of a delayed permanent repository toward the end of the century;
- b. Identify and eliminate from detailed study those issues that are peripheral or that are not significant. Also note that analysis of environmental impacts for this effort would be principally intended to provide input to the decision-makers for the Waste Confidence rulemaking and would not involve analysis of site-specific issues;
- c. Identify any EAs and other EISs that are being or will be prepared that are related to but are not part of the scope of the EIS being considered;

- d. Identify other environmental review and consultation requirements related to the proposed action;
- e. Indicate the relationship between the timing of the preparation of the environmental analyses and the Commission's tentative planning and decision-making schedule;
- f. Identify any cooperating agencies and, as appropriate, allocate assignments for preparation and schedules for completing the EIS to the NRC and any cooperating agencies;
- g. Describe how the EIS will be prepared, including any contractor assistance to be used. The NRC will prepare a draft EIS in accordance with its regulations in 10 CFR Part 51; and
- h. Obtain public input on potential locations for future public meetings on the draft EIS.

On October 25, 2012, NRC staff e-mailed the scoping notice to the Waste Confidence e-mail distribution list (ADAMS Accession No. ML12299A526). On October 25, 2012, the NRC's [WCOutreach@nrc.gov](mailto:WCOutreach@nrc.gov) e-mail distribution list consisted of approximately 1,049 individuals, including individuals who expressed interest in previous spent nuclear fuel studies and efforts; members of the public who are on mailing lists for new reactor and license renewal environmental reviews; representatives from federal, state, local, and tribal governments; and representatives from industry and public advocacy groups and environmental organizations. (Note that in the months following publication of the Waste Confidence EIS scoping notice, the [WCOutreach@nrc.gov](mailto:WCOutreach@nrc.gov) e-mail distribution list has grown to approximately 3,752 subscribers.) A press release announcing the Waste Confidence EIS scoping period and the planned public meetings was issued on October 24, 2012, the day before publication of the scoping notice in the *Federal Register* (ADAMS Accession No. ML12298A295).

With assistance from the NRC's Office of Federal and State Materials and Environmental Management Programs (FSME), the scoping notice was mailed (and also e-mailed, when possible) to all federally recognized Native American tribes located within 50 miles of nuclear power plants, tribes that had registered with the NRC for advance notification of shipments of irradiated reactor fuel and nuclear waste under 10 CFR Parts 71 and 73, and tribes that had previously expressed interest in the NRC's Yucca Mountain application activities (see ADAMS Accession No. ML12311A464 for an example of the tribal outreach letter that transmitted the scoping notice). Approximately 102 tribes were mailed a copy of the Waste Confidence scoping notice. FSME also issued the scoping notice to state liaison officers in all agreement and nonagreement states (ADAMS Accession No. ML12293A107).

#### **A5. Public Webcast Meetings and Webinars**

During the 70-day scoping period, the NRC conducted two public webcast scoping meetings and two scoping webinars.<sup>1</sup> The webcast meetings and webinars each began with a slide presentation by NRC staff, followed by a question-and-answer period, with the remainder of time dedicated to listening to and transcribing public scoping comments. All comments received

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<sup>1</sup> Webcast meetings are public meetings that are broadcasted live over the Internet via streaming video at the NRC's live meeting webcast page (<http://video.nrc.gov/>). Webinars differ from webcasts in that they do not feature a live video feed of the NRC staff, but instead only share the NRC's slide presentations using GoToMeeting<sup>®</sup>, a web-based online meeting portal.

during the scoping meetings and webinars and written comments submitted in person at the November 14, 2012, afternoon meeting were considered by NRC staff and are summarized in this report.

The webcast meetings and webinars were announced in two separate meeting notices that were posted on the NRC's public meeting notification system website (ADAMS Accession Nos. ML12306A224 and ML12326A911). The meeting notices were e-mailed to the WCO outreach@nrc.gov distribution list. In addition, the NRC's Office of Public Affairs authored a blogpost that mentioned the webcasts and webinars (<http://public-blog.nrc-gateway.gov/2012/10/26/introducing-the-nrcs-waste-confidence-directorate/>) and issued three Tweets from the NRC's Twitter account (<https://twitter.com/nrcgov>) to remind people of the December webinars.

On Wednesday, November 14, 2012, staff conducted public scoping meetings at NRC headquarters in Rockville, MD, at 1 p.m. and 9 p.m. EST. The NRC chose to hold a late-night meeting to accommodate stakeholders in western time zones. Both meetings were viewable online via live webcast at <http://video.nrc.gov/>. A moderated teleconference line was available for remote participants to ask questions and present comments. Approximately 75 people attended the afternoon meeting in person, and 30 people participated remotely using the teleconference line. Of those 105 total participants, 27 people presented comments. Approximately 22 members of the public called in to the late-night teleconference meeting, and 12 of those participants presented comments. Approximately 125 people viewed one of the two webcasts. Transcripts of both meetings are available in ADAMS under Accession Nos. ML12331A347 for the afternoon meeting and ML12331A353 for the late-night meeting. A summary of these meetings, including a list of all participants, is available in ADAMS under Accession No. ML12339A281.

The NRC conducted public scoping webinars from 1 p.m. through 4 p.m. EST on December 5, 2012, and from 9 p.m. through 12 a.m. EST on December 6, 2012. Both webinars were accessible online using GoToMeeting<sup>®</sup>, a web-based online meeting portal. A moderated teleconference line provided audio for the webinars. Participants did not need internet access to listen to and participate in the webinars. Approximately 63 people participated in the December 5 daytime webinar. Of those 63 participants, 13 asked questions or presented comments. Approximately 21 people participated in the December 6 evening webinar. Of those 21 participants, 12 asked questions or presented comments. Transcripts of both webinars are available in ADAMS under Accession No. ML12355A174 for the December 5 webinar and ML12355A187 for the December 6 webinar. A summary of these webinars, including a list of all participants, is available in ADAMS under Accession No. ML12356A293.

## **A6. Comments Received During the Scoping Period**

At the conclusion of the scoping period on January 2, 2013, NRC staff reviewed the four transcripts from the scoping meetings and webinars, along with all written material received, and identified individual comments within each piece of comment correspondence. Late comments were considered as practicable. Scoping comments were consolidated and categorized either



according to subject matter or according to the general topic if outside the scope of the GEIS. Comments with similar specific objectives or concerns were further grouped to capture the common issues that had been raised in the source comments. Once comments were grouped according to subject area, NRC staff determined the appropriate response for that set of similar comments. NRC responses to comments are presented in Section B of this report. Section C contains a table that identifies all commenters and the ADAMS Accession numbers where their comments can be found. A separate document, "Scoping Comments on the Waste Confidence Generic Environmental Impact Statement" is located in ADAMS under Accession No. ML13060A130. This document contains a table that identifies comments made in each category and then provides those comment excerpts, again organized by comment category.

The NRC received approximately 700 pieces of comment correspondence via the public webcast meetings and webinars, via the Waste Confidence docket (NRC-2012-0246) on [www.Regulations.gov](http://www.Regulations.gov), by mail, and by fax. Approximately 300 of these pieces of correspondence involved the submission of a form letter. During the NRC's review of scoping comments, four form letters were identified: ADAMS Accession Nos. ML12319A466, ML13022A222, ML13023A405, and ML12331A278. Comments contained in these form letters were captured in this scoping summary report just once; however, all authors who submitted a substantially identical version of a form letter are listed as authors of the comments and have received an ADAMS Accession number where their comment submissions can be found. As an administrative measure, it should be noted that some form letter submissions were grouped together in one multipage PDF document, and consequently many form comments will be referenced by one ADAMS Accession number.

A petition was submitted by Michael Mariotte (Nuclear Information and Resource Service) that included comments on the scope of the Waste Confidence GEIS and was electronically signed by approximately 2,640 people. Many of these electronic signatures are accompanied by brief individual comments that, among other things, generally express opposition to nuclear power and the Waste Confidence rulemaking, express concerns about NRC oversight of the nuclear industry, express general safety concerns regarding operating reactors and spent nuclear fuel storage, and express concerns about accidents similar to those at Fukushima Dai-ichi and Chernobyl power plants. Because these signature comments are substantially duplicative of other comments that are addressed elsewhere, the 2,640 signatures and the associated signature comments are not captured in this scoping summary report; however, the petition can be viewed in ADAMS under Accession No. ML13022A223.

#### **A7. Issues Raised During the Scoping Period**

As the NRC reviewed transcripts and written material, comments were extracted and organized into several broad categories. These comment categories and major topics and issues of concern within each category follow. The bulleted topics and issues under each category are not exhaustive, but include the most common concerns heard in the scoping comments.

### **Land Use**

- Bounding estimates for land use impacts from spent nuclear fuel storage

### **Socioeconomics**

- Socioeconomic implications (notably economic and tax considerations) of long-term and indefinite onsite spent nuclear fuel storage

### **Environmental Justice**

- Concerns that environmental justice cannot be evaluated generically
- Opposition to spent nuclear fuel being stored near economically stressed communities

### **Meteorology and Air Quality**

- Impacts of climate change, including severe weather events that may be a result of climate change

### **Hydrology**

- Radiological contamination of surface water and groundwater from spent nuclear fuel storage

### **Aquatic Ecology**

- Bounding estimates of the impacts to various ecosystems and assessment of potential mitigation measures

### **Transportation**

- Transportation required for centralized interim storage
- Timeframes and scenarios to consider spent nuclear fuel transportation
- Comments suggesting the NRC should reference the U.S. Department of Energy's (DOE) Yucca Mountain EIS (DOE 2002) transportation analysis

### **Nonradiological Health**

- General concerns about public health and safety with regard to nuclear power

### **Radiological Health**

- Bounding radiological doses
- Doses from high-burnup fuel
- General concerns regarding radiological impacts from spent nuclear fuel storage, including radiological risks from spent fuel pool leaks

### **Safety**

- Safety concerns regarding spent fuel pools, including fires and leaks
- Calls for reconfiguring spent fuel pools and required dry cask storage
- Concerns regarding dry casks and high-burnup fuel
- Embrittlement, stress corrosion cracking, and other potential types of dry cask degradation

### **Accidents**

- Concerns about accidents similar to the Fukushima Dai-ichi event
- Incorporation of lessons learned from Fukushima into the Waste Confidence GEIS and proposed rulemaking
- Hazards to spent nuclear fuel due to natural events, including flooding and other extreme weather events
- Seismic risks to and general accident susceptibility of spent fuel pools and dry casks
- Spent fuel pool criticality and loss of spent fuel pool coolant
- Solar flares and their impact on the electrical grid

### **Security and Terrorism**

- Vulnerability of dry casks and spent fuel pools to terrorist attack

- Concerns regarding generic analysis of environmental impacts from malevolent events
- Collaboration with other agencies and experts

#### **Cost Considerations**

- Cost of extended storage of spent nuclear fuel, including transfer facilities and accident recovery

#### **Cumulative Impacts**

- Cumulative impacts from spent fuel storage leaks and other connected actions (including accidents) to a variety of resources, including radiological health and surface and groundwater

#### **Alternatives**

- The need for site-specific analysis of Waste Confidence
- The no-action alternative
- Calls to stop nuclear waste production by ending licensing and decommissioning existing nuclear facilities
- Alternatives within the NRC's regulatory requirements regarding spent fuel storage
- Criticism or support of the Yucca Mountain EIS (DOE 2002) no-action alternative
- Alternatives for storing spent nuclear fuel

#### **Evaluation Scenarios**

- Loss of future institutional control of spent nuclear fuel
- The availability of a permanent, geologic repository and the timeframes of "temporary" onsite spent fuel storage
- The need for multiple geologic repositories due to the accumulation of spent nuclear fuel
- The future of the nuclear industry and the amount of spent nuclear fuel that will need to be ultimately disposed of
- A call for the "Five Findings" in the remanded Waste Confidence Decision and Rule to be evaluated in the GEIS
- Impediments to implementation of Yucca Mountain or any repository
- Inclusion of high-burnup fuel, mixed-oxide fuel, vitrified nuclear waste, and radioactive wastes from reprocessing in GEIS
- Repackaging of spent nuclear fuel and dry transfer systems (DTS)
- The GEIS should consider a range of storage scenarios
- A call for hardened onsite storage (HOSS) for spent nuclear fuel and expedited transfer of spent nuclear fuel from pools to dry casks
- Consolidated or centralized interim spent fuel storage
- The GEIS should include an evaluation of mitigation
- New reactor technologies in developmental or research stages

#### **NEPA Process**

- The 24-month schedule for the Waste Confidence environmental review and rulemaking, including concerns about the 70-day scoping period
- Requests to withdraw the scoping notice because it is inadequate
- General comments regarding how the NRC will comply with NEPA
- NRC environmental review documents applicable to the Waste Confidence GEIS
- Section 106 consultation
- Consultation with federally recognized tribes
- Importance of scoping to eliminate peripheral issues

- Identification of other EISs, EAs, and technical studies to inform the GEIS
- Calls for and against limiting the GEIS to only address the deficiencies identified by the D.C. Circuit Court of Appeals
- Research and data needed for the GEIS and proposed rulemaking
- Calls for more (in-person) public scoping meetings
- Suggested locations for regional GEIS public meetings
- Suggested improvements for submitting comments and overall public outreach
- Public access to information
- Comments received during the 2011 pre-scoping effort for the long-term Waste Confidence update EIS
- Comments suggesting the NRC should consult with other government agencies

### **The Rulemaking**

- General questions regarding the proposed action (i.e., the rulemaking) and misperceptions regarding Waste Confidence as a licensing action
- Connection between the “Five Findings” and the revised rule
- General opposition to the idea of “Waste Confidence” and the Waste Confidence rule as a generic determination of environmental impacts and safety
- General support of the Waste Confidence rulemaking and preparation of a GEIS

### **Out of Scope**

- Environmental impacts of the entire nuclear fuel cycle from mining to decommissioning, outside of the context of their inclusion in the cumulative impacts analysis
- Impacts of reprocessing and wastes from reprocessing
- Greater-Than-Class C (GTCC) radioactive waste
- Spent nuclear fuel from foreign countries
- Vitrified waste at the West Valley Site
- Site-specific examples of issues that the Waste Confidence GEIS should address
- General site-specific concerns such as safety and radiological health risk at particular proposed and existing reactor sites
- General concerns regarding NRC’s oversight of the nuclear industry
- Calls for changes to NRC regulations regarding spent fuel storage and reactor safety
- Requirements for radiation monitoring at nuclear plants
- Calls for replacing nuclear energy with renewable forms of energy such as wind, solar, and geothermal
- Site-specific emergency planning concerns
- Comments specific to the Yucca Mountain proceeding, including frustrations about the lack of a permanent repository and general need for one
- Site-specific issues about NRC activities, processes, and oversight unrelated to Waste Confidence
- Suggestions for a new or different agency to address nuclear waste
- Novel alternatives for storing spent nuclear fuel; experimental fuel cladding materials
- Federal funding of spent fuel storage site monitoring
- The NRC’s adjudicatory process as related to Waste Confidence, and procedures for raising site-specific concerns to the Atomic Safety and Licensing Board (ASLB)
- General opposition to nuclear power that primarily cites health risks
- General support of nuclear power in the context of preventing global warming

## **A8. Scope of the Waste Confidence GEIS**

As a result of the scoping process, the NRC staff has identified and eliminated peripheral issues that will not be covered in the Waste Confidence GEIS. Section B, "Responses to Scoping Comments," provides responses that either discuss why particular topics or concerns are outside the scope of the GEIS, or indicates that these concerns or topics are in scope and will be evaluated and documented in the GEIS. In many cases, the NRC cannot state with any specificity the degree of analysis that will be applied to any of these in-scope issues. Commenters should not expect that every item identified as "in scope" for the GEIS will receive the same level of review and analysis.

The general scope of the GEIS includes an evaluation of the environmental impacts of continued storage and reasonable alternatives to continued storage, including the no-action alternative. In the following discussion, the NRC outlines its current approach to the structure of the GEIS. The draft GEIS, which will be published for public comment later this year, may adopt a different format than is outlined here.

Chapter 1 of the GEIS will provide an introduction to Waste Confidence; discuss the proposed action, purpose and need of the proposed action, and alternatives to the proposed action; outline the specific assumptions that informed the analyses contained in later chapters of the GEIS; and list applicable regulations and related environmental documents used in the environmental review.

Chapter 2 of the GEIS will describe typical facility characteristics and activities that are used to assess the environmental impacts that may occur from continued storage.

Chapter 3 will contain a discussion of the affected environment that exists at and around continued storage facilities, and will form the basis for assessing the potential impacts in Chapter 4. The affected environment will include the following resource areas: land use, socioeconomics, environmental justice, climate and air quality, geology and soils, water resources (surface water and groundwater), ecological resources (terrestrial and aquatic resources), historic and cultural resources, noise, aesthetics, waste management, transportation, and public and occupational health.

In Chapters 4 and 5 of the GEIS, the NRC will evaluate the environmental impacts of continued storage at onsite and offsite storage facilities. These chapters will also include a discussion of potential mitigation that could reduce or avoid adverse environmental impacts.

Chapter 6 will consider and evaluate the cumulative impacts that could occur from the incremental impact of continued storage when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes these other actions. Other past, present, and reasonably foreseeable future actions that will be considered in the cumulative impact assessment include reactor construction and operation; decommissioning of reactors, spent fuel pools, and ISFSIs; preparation activities to

transport spent nuclear fuel offsite; and other federal and non-federal activities that have been identified near nuclear power plants and storage facilities.

Chapter 7 will discuss the costs for continued spent fuel storage.

Chapter 8 will include a summary of environmental consequences, including a comparison of environmental impacts, unavoidable adverse environmental impacts, irreversible and irretrievable commitments of resources, the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, and the NRC's conclusions and recommendations that will inform the Waste Confidence proposed rule.

Chapter 9 will list preparers of the GEIS.

Chapter 10 will be an index and glossary of terms.

The GEIS will also include a number of technical appendices to support the conclusions in the main body of the report, including (but not limited to) a detailed analysis of spent fuel pool leaks and fires.

There are a number of NRC environmental reviews for licensing actions that are pending resolution of the Waste Confidence environmental review and rulemaking. A list of these licensing actions is included as the enclosure to SECY-12-0132, "Licensing Actions Affected by Waste Confidence Remand" (NRC 2012b). The Waste Confidence final GEIS and rule will inform those reviews with respect to the environmental impacts of spent fuel storage post-licensed life of a reactor and prior to ultimate disposal. To the extent that the GEIS will bound the sites being evaluated in those ongoing licensing reviews, the Waste Confidence environmental review will consider relevant information related to those sites and facilities.

#### **A9. Issues Outside the Scope of the Waste Confidence GEIS**

The Waste Confidence GEIS will evaluate the environmental impacts of continued storage. Certain topics will not be addressed in the Waste Confidence GEIS, because they are not within the scope of the Waste Confidence environmental review. As noted previously, responses to comments on these topics discuss why these topics are outside the scope of the Waste Confidence GEIS. These topics include (but are not limited to)

- Consideration of noncommercial spent nuclear fuel (e.g., defense waste, other wastes from reactor operations),
- Consideration of nonpower reactor spent nuclear fuel (e.g., test reactors),
- Need for nuclear power and alternatives to nuclear power,
- Consideration of environmental impacts of constructing and operating reprocessing facilities for commercial spent nuclear fuel,
- Continued storage of commercial high level waste that would be created by reprocessing,
- Emergency preparedness, and
- Uranium fuel cycle.

Interested parties submitted hundreds of comments that suggested the NRC should consider a cessation of all licensing activities or cessation of all nuclear power plant operations as an alternative. A variety of other scoping comments suggested that the NRC should require the implementation of HOSS as an alternative. The NRC considered but ultimately dismissed these suggested alternatives for the purposes of this GEIS. Cessation of licensing activities and overall reactor operations does not satisfy the purpose and need for the GEIS. With regard to HOSS, the NRC is already considering implementing revised security requirements as part of the ongoing ISFSI security rulemaking effort. The rulemaking effort is described in the December 16, 2009, *Federal Register* notice (74 FR 66589), "Draft Technical Basis for Rulemaking Revising Security Requirements for Facilities Storing SNF and HLW; Notice of Availability and Solicitation of Public Comments."

Section B of this scoping summary report, "Responses to Scoping Comments," provides responses to these suggested alternatives and other out-of-scope concerns.

#### **A10. Consultation Requirements and Cooperating Agencies**

The NRC recognizes there are specific government-to-government consultation responsibilities regarding interactions with federally recognized tribal governments because of their status as dependent sovereign nations. As such, the NRC offers federally recognized tribes the opportunity for government-to-government consultation consistent with the principles in Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments" issued November 9, 2000 (65 FR 67249). At the request of tribal governments, the NRC, if invited, would be willing to participate in government-to-government meetings to discuss the Waste Confidence GEIS development effort.

To date, the NRC staff has conducted outreach to all federally recognized Native American tribes located within 50 miles of nuclear power plants, tribes that had registered with the NRC for advance notification of shipments of irradiated reactor fuel and nuclear waste under 10 CFR Parts 71 and 73, and tribes that had expressed interest in the NRC's Yucca Mountain application activities. Three tribes contacted the NRC regarding the Waste Confidence rulemaking: the Prairie Island Indian Community (a federally recognized tribe located immediately adjacent to the Prairie Island Nuclear Generating Plant, Units 1 and 2), the state-recognized Northern Chumash Tribal Council, and the federally recognized Santa Ynez Band of Chumash Indians (the latter two located near Diablo Canyon Power Plant). The Waste Confidence GEIS will include an appendix that contains correspondence related to NRC's outreach with Native American tribes. The NRC encourages interested Native American tribes to participate throughout the Waste Confidence environmental review. The NRC will continue outreach efforts with Native American tribes throughout the course of this rulemaking.

The NRC met with representatives from the U.S. Environmental Protection Agency (EPA) on November 5, 2012. The purpose of the meeting was to provide historical information on the Waste Confidence rule, to discuss the status of the Waste Confidence environmental review and rulemaking, to discuss how the NRC was conducting new reactor and license renewal reviews in the interim while Waste Confidence was addressed, and to receive advice on the

NRC's approach. EPA provided comments on the scope of the Waste Confidence GEIS (ADAMS Accession No. ML13028A469), and the NRC will continue to consult with the EPA as the Waste Confidence environmental review proceeds.

The Waste Confidence rulemaking does not identify specific sites for NRC licensing actions that would trigger consultation requirements that are normally conducted during site-specific licensing reviews. Additionally, the Waste Confidence rule is not a licensing action. It does not authorize the initial or continued operation of any nuclear power plant, and it does not authorize storage of spent nuclear fuel. The NRC will continue to meet these specific consultation requirements (for example, consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, consultation with the National Marine Fisheries Service under the Magnuson-Stevens Fisheries Conservation and Management Act, and consultation with the applicable State Historic Preservation Office or Tribal Historic Preservation Office under Section 106 of the National Historic Preservation Act, among others) in all future site-specific licensing reviews that rely upon Waste Confidence.

The NRC did not identify any cooperating agencies for the Waste Confidence environmental review, nor did the NRC receive any formal requests for cooperating agency status.

#### **A11. Future Opportunities for Public Participation**

Later this year the NRC will issue for public comment a draft GEIS and a proposed Waste Confidence decision and rule that have been informed by the GEIS. Both the draft GEIS and the proposed decision and rule will have concurrent public comment periods. The comment period offers the next opportunity for interested federal, state, and local government agencies; tribal governments; local organizations; advocacy groups; environmental organizations; and other members of the public to comment on the NRC's Waste Confidence GEIS and rulemaking. All comments received on the draft GEIS and proposed decision and rule will be considered in the preparation of the final GEIS and final decision and rule. Comments on the GEIS and proposed rule, and responses to those comments (noting any edits and changes to the GEIS and rule as a result of comments), will be published as well. The final GEIS will provide the regulatory basis for the NRC's final Waste Confidence rule, both of which are scheduled to be issued by September 2014.

#### **A12. Comments on December 2011 Draft Report, "Background and Preliminary Assumptions for an Environmental Impact Statement—Long-Term Waste Confidence Update"**

In December 2010, the Commission directed NRC staff to develop an EIS that would address the environmental impacts of spent fuel storage beyond a 120-year timeframe and thereby provide a long-term update of the Waste Confidence decision and rule. Staff provided information about the EIS development plans to the Commission in SECY-11-0029, "Plan for the Long-Term Update to the Waste Confidence Rule and Integration with the Extended Storage and Transportation Initiative," dated February 28, 2011 (NRC 2011b). Staff then began pre-scoping efforts to gather public input on the proposed activities and path forward. The NRC



held three public meetings and two webinars from September through December 2011. The staff issued a draft report in December 2011, entitled “Background and Preliminary Assumptions for an Environmental Impact Statement—Long-Term Waste Confidence Update” (NRC 2011a), as a means to seek public feedback on the agency’s preliminary plans to develop the long-term update EIS. The NRC sought to ensure that the preliminary EIS scope described in the draft report considered the significant factors related to the longer term storage of spent nuclear fuel and high-level waste. The report included background on the history of Waste Confidence, as well as the national regulatory and historical context. Technical topics in the paper included the potential purpose and need and alternatives under NEPA, methodology for analyzing impacts over a long timeframe, use of generic composite sites developed from site-specific data, potential scenarios for analysis (such as onsite storage, consolidated storage, and reprocessing), and assumptions to be used. The comment deadline on that report closed on March 19, 2012.

Nearly 200 comment letters on the draft report were received from a variety of agencies, organizations, and members of the public. Comments covered a wide variety of issues. Many commenters’ questions included regulatory concerns, such as why Waste Confidence is or is not needed, whether the proposed length of study was or was not appropriate, why the NRC is developing an EIS, the feasibility of institutional controls and financial surety, and the need for periodic updates of the EIS. Comments regarding outreach focused on requests for interactions with state and local governments, tribes, and organizations, and the continued need for public meetings and webinars. Comments about the proposed scenarios included questions about and inclusion of offsite consolidated storage, and both support and criticism regarding the inclusion of reprocessing. Many comments indicated an interest in expanding the previous scope of Waste Confidence considerations to include alternative energy sources, HOSS, expedited transfer of fuels from spent fuel pools to dry casks, and site-specific concerns. Additionally, many commenters expressed interest in inclusion of expanded discussions regarding security and terrorism, natural hazards (such as lessons learned from Fukushima), and transportation in the scope of the long-term update EIS.

The NRC was developing responses to the comments received during the pre-scoping comment period and in the public meetings when the D.C. Circuit Court of Appeals issued its ruling in June 2012 (D.C. Cir. 2012). Comments on the December 2011 report are available for review in ADAMS, and Section E of this report contains a table that lists commenters, their affiliation, and the date and ADAMS Accession number of their comments from that previous effort.

## **B. Responses to Scoping Comments**

### **B1. Organization of Responses**

The NRC's responses to comments and suggestions received as part of the Waste Confidence environmental scoping process are included in this section of the report. Comments were grouped by category, and comments with similar themes were further subgrouped to capture essential issues. Responses are provided for each subgroup of similar comments. Comment excerpts, grouped by category, can be found in a separate document titled, "Scoping Comments on the Waste Confidence Generic Environmental Impact Statement." This document is located in ADAMS under Accession No. ML13060A130.

Section D of this report contains a table that identifies, in alphabetical order, the individuals providing comments, their affiliation if provided, and the ADAMS Accession number than can be used to locate the correspondence.

Accession numbers indicate the location of the written comments in ADAMS. All documents associated with this scoping process are available for public inspection in the NRC Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike, Rockville, MD 20852, or from ADAMS. The ADAMS Public Electronic Reading Room is accessible at <http://www.nrc.gov/reading-rm/adams.html>. Persons who encounter problems in accessing documents in ADAMS should contact the NRC's PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737 or by e-mail at [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov).

### **B2. Comments Concerning Land Use**

The NRC received one comment recommending that the GEIS consider bounding estimates for the worst-case loss of agricultural land and production. The NRC plans to use existing information to generically assess land use impacts by reviewing the evaluations in other generic environmental impact statements and site-specific EAs and EISs. This approach follows the Commission's direction in Staff Requirements Memorandum for COMSECY-12-0016, "Approach for Addressing Policy Issues Resulting from Court Decision to Vacate Waste Confidence Decision and Rule" (NRC 2012c) to "coordinate and take appropriate advantage of existing documents and studies, including through adoption and incorporation by reference." The appropriate use of existing information is sufficient to generically demonstrate the range of expected impacts that could occur from continued spent fuel storage. As with all NEPA analyses, the GEIS will analyze reasonably foreseeable events; the NRC will not analyze worst-case impacts.

Comment: (0286-54)

### **B3. Comments Concerning Socioeconomics**

#### **A. General Concerns**

The NRC received comments recommending that the GEIS consider socioeconomic issues, such as tax and economic implications of indefinite storage of spent nuclear fuel at reactor sites. These issues will be considered in the GEIS.

Comments: (0275-11) (0275-3) (0291-2) (0291-21) (0291-22) (0291-23) (0291-24)

#### **B. States' Rights and Responsibilities**

The NRC received a comment that expressed concerns about states' rights and responsibilities. States and other interested parties will be able to participate in the NEPA and rulemaking process through the notice-and-comment period on the proposed rule and the draft GEIS.

Comments: (0004-25-15) (0004-25-16) (0296-11)

### **B4. Comments Concerning Environmental Justice**

The NRC received comments recommending that the GEIS consider local and intergenerational environmental justice, such as economically depressed areas and future generations bearing the burden of spent nuclear fuel. The GEIS will include a discussion of the incremental impacts of continued storage on environmental justice. Site-specific licensing actions, such as initial or renewed reactor licenses, will include a site-specific assessment of environmental justice issues.

Comments: (0004-14-4) (0004-23-4) (0004-4-4) (0041-3) (0118-17-13) (0118-17-3) (0118-17-5) (0269-20) (0269-5) (0273-5) (0284-4) (0286-57) (0286-87) (0290-6) (0296-19) (0296-20) (0321-7)

### **B5. Comments Concerning Meteorology and Air Quality**

#### **A. Long-term Heat from Spent Nuclear Fuel**

The NRC received comments recommending that the GEIS consider the environmental impacts of heat generated by spent nuclear fuel. The GEIS will consider the environmental impacts of heat generated by spent nuclear fuel on surface waters and climate.

Comments: (0004-25-5) (0296-29)

#### **B. Climate Change**

The NRC received comments recommending that the GEIS consider the environmental impacts of climate change, including the impact of weather events that may be linked to climate change. The NRC also received comments concerning the ability to assess climate change impacts in the future. The GEIS will consider the environmental impacts of climate change on the continued storage of spent nuclear fuel, including severe weather events that may be linked to climate change.

Comments: (0004-15-4) (0004-18-6) (0004-25-10) (0005-17-7) (0005-7-1) (0009-4) (0021-2) (0053-3) (0058-11) (0092-6) (0118-11-2) (0118-9-2) (0118-9-4) (0129-5) (0148-31) (0225-3) (0269-7) (0272-7) (0277-6) (0285-17) (0285-5) (0286-83) (0286-84) (0296-27) (0296-28) (0323-3) (0323-4)

### **C. Carbon Dioxide**

The NRC received comments recommending that the GEIS consider the amount of carbon dioxide generated by the nuclear fuel cycle. The GEIS will consider the impacts of air emissions from the continued storage of spent nuclear fuel, including greenhouse gases like carbon dioxide. Environmental impacts associated with parts of the fuel cycle outside of continued storage (e.g., mining, disposal) are outside the scope of the GEIS.

Comments: (0005-17-1) (0053-4)

### **B6. Comments Concerning Hydrology**

The NRC received comments recommending that the GEIS consider radiological contamination of surface and groundwater. The GEIS will consider the potential environmental impacts of continued storage on surface and groundwater.

Comments: (0005-11-4) (0005-17-4) (0049-7) (0110-2) (0113-2) (0135-2)

### **B7. Comments Concerning Aquatic Ecology**

The NRC received comments recommending that the GEIS consider bounding estimates of the impacts to various ecosystems and assess potential mitigation measures. The GEIS will consider the impacts to aquatic resources that could be affected by continued storage, including potentially affected riverine, lacustrine, and estuarine ecosystems. The GEIS will also describe potential mitigation measures to the extent these measures would be readily and generically available and could reduce or minimize any significant impacts.

Comments: (0286-118) (0286-53) (0286-55)

### **B8. Comments Concerning Transportation of Spent Nuclear Fuel**

#### **A. General Concerns**

The NRC received comments recommending that the GEIS consider transportation of spent nuclear fuel to a repository or central storage location, including various timeframes and scenarios for shipments and future trends affecting transportation. Other comments requested that transportation costs be excluded because the impacts would be evaluated later when facilities are licensed. One commenter expressed concern regarding the time required to transport spent fuel to a repository. The NRC also received comments that recommended using the impact analysis that was conducted by the DOE for the Yucca Mountain proposed repository EIS (DOE 2002) to evaluate similar types of impacts. Transportation of spent nuclear fuel will be discussed in the cumulative impacts analysis in the GEIS.

Comments: (0004-8-5) (0096-3) (0118-9-1) (0119-9-1) (0148-33) (0244-11) (0263-18) (0265-12) (0265-16) (0265-17) (0265-18) (0265-26) (0266-3) (0267-4) (0271-14) (0271-16) (0272-11) (0278-2) (0286-20) (0286-71) (0286-72)

## **B. Details of Transportation**

The NRC received a comment recommending that the GEIS include a map showing nuclear power plant locations and their spent fuel storage destinations across the United States. The NRC will consider this suggestion as it develops the GEIS. However, any map will be limited to the locations of nuclear power plants because there are no currently operating facilities for centralized spent fuel storage and disposal.

Comment: (0274-8)

## **C. Volume of Spent Nuclear Fuel Transportation Activities**

The NRC received a comment regarding the volume of spent nuclear fuel transportation, including a request to minimize the transportation of spent nuclear fuel. Transportation of spent nuclear fuel will be discussed in the cumulative impacts analysis in the GEIS.

Comment: (0294-4)

## **B9. Comments Concerning Nonradiological Health**

The NRC received comments expressing general concern about public health and continued storage. The GEIS will evaluate the environmental impacts of the continued storage, including health impacts.

Comments: (0058-5) (0143-1) (0240-1)

## **B10. Comments Concerning Radiological Health**

### **A. General Concerns**

The NRC received several comments about general radiological health and impacts from exposure to radiation. The GEIS will address potential radiation doses and associated public and occupational health effects associated with continued storage. The environmental impacts of operating reactors and disposal of spent nuclear fuel in a repository will not be considered beyond their inclusion in a discussion of cumulative radiological impacts. These matters are considered when those types of facilities receive NRC site-specific licenses and are outside the scope of this generic analysis, which concerns the continued storage of spent nuclear fuel beyond the licensed life of a nuclear power plant.

Comments: (0004-13-9) (0004-16-1) (0004-5-1) (0005-16-1) (0005-17-5) (0005-2-4) (0005-2-5) (0071-1) (0075-4) (0090-2) (0090-3) (0119-5-2) (0119-9-2) (0121-2) (0145-2) (0169-1) (0176-1) (0196-2) (0199-1) (0215-5) (0217-2) (0246-7) (0269-17) (0277-1) (0285-1) (0285-11) (0285-2) (0285-20) (0286-17) (0286-22) (0286-23) (0286-25) (0286-75) (0286-95) (0286-96) (0286-97) (0287-1) (0296-25) (0336-1)

## **B. Environmental Pathways**

The NRC received two comments requesting that the GEIS cite specific information on the inventory of irradiated fuel rods and the biological pathways these radionuclides could take through the environment. This type of information will be provided in the GEIS to the extent it is necessary to describe the generic environmental impacts of continued storage.

Comments: (0118-3-3) (0138-1)

## **C. Radiological Impacts of Storage and Disposal**

The NRC received comments asking that the GEIS include an analysis of the advantages and disadvantages of continued storage as opposed to disposal in a repository. The purpose of the GEIS is to generically assess the environmental impacts of continued storage. A comparison of environmental impacts resulting from different continued storage scenarios may be included in the GEIS.

Comments: (0265-11) (0265-13) (0271-13) (0271-15)

## **D. Occupational Exposure**

The NRC received one comment expressing concern about the improper handling of radioactive materials and toxic exposures to site workers. Handling of radioactive materials is a regulated activity. Site-specific licensing conditions specify the proper radioactive material handling procedures and appropriate corrective actions. The Waste Confidence GEIS will consider the potential environmental impacts and health effects associated with off-normal operations and accidents to workers, as well as the public.

Comment: (0005-17-3)

## **E. Bounding Radiation Values**

The NRC received comments concerning the use of bounding values for assessing radiological risk in the Waste Confidence GEIS. The NRC plans to use existing information and radiological data to create a baseline for assessing environmental impacts and health effects. These comments will be considered during the development of the GEIS.

Comments: (0286-26) (0325-9)

## **F. Radiological Monitoring**

The NRC received comments about current requirements for radiological monitoring and reporting under normal and off-normal events. The GEIS will address effluent monitoring associated with continued storage. Comments requesting additional effluent monitoring are out of scope because the GEIS is a generic analysis of environmental effects and cannot place specific requirements on nuclear power plants.

Comments: (0004-25-4) (0118-22-1) (0119-10-4)

## **G. Groundwater Contamination**

The NRC received comments concerning contamination of groundwater (including tritium) around nuclear power plants and public notification of contamination. Impacts to groundwater during continued storage, including impacts from spent fuel pool leaks, will be analyzed in the GEIS.

Comments: (0092-5) (0096-4) (0118-10-1) (0286-119)

## **H. Site-Specific Radiation Monitoring**

The NRC received a comment regarding site-specific radiological monitoring. The GEIS will rely primarily on existing NRC requirements for licensee radiological monitoring and reporting programs, and monitoring data reported to the NRC from these programs that would support generic conclusions concerning the environmental impacts related to continued storage of spent nuclear fuel.

Comment: (0296-15)

## **I. Contamination From Decommissioning**

The NRC received comments about contamination from decommissioned and decommissioning nuclear facilities. These activities are not related to the impacts of continued storage. However, the cumulative impacts assessment will consider the past, present, and reasonably foreseeable activities that could result in radiological contamination near nuclear power plants and away-from-reactor storage facilities.

Comments: (0118-17-8) (0297-3)

## **B11. Comments Concerning Safety**

### **A. Dry Cask Impacts**

The NRC received several comments expressing concern about the safety of currently loaded dry cask designs, including materials, aging, and handling casks that need to be repaired or replaced. The GEIS will consider the environmental impacts of continued spent nuclear fuel dry storage, including degradation and aging management of dry cask storage systems, high-burnup fuel, and the potential need for repackaging.

The NRC has 30 years of experience demonstrating that spent nuclear fuel can be stored safely. While concerns about the NRC's safety programs—such as quality assurance and safety evaluations in licensing—are outside the scope of the GEIS analysis, when the NRC issues certificates for specific dry cask storage systems and license ISFSIs, the staff makes a determination that the designs provide reasonable assurance that the spent nuclear fuel will be stored safely for the term of the license or certificate. All dry cask designs and ISFSIs currently storing commercial spent nuclear fuel have been approved by the NRC. The NRC staff is aware of concerns that were raised with respect to specific designs and storage systems;

however, all dry cask storage systems certified by the NRC and in use at ISFSIs are operating safely and meet all NRC regulations.

Comments: (0004-13-12) (0004-6-7) (0005-5-14) (0005-5-15) (0005-5-6) (0055-7) (0062-10) (0062-11) (0063-6) (0067-4) (0068-10) (0068-9) (0069-8) (0071-7) (0072-10) (0074-3) (0080-7) (0080-8) (0093-7) (0093-8) (0118-17-2) (0118-2-7) (0118-2-8) (0118-9-3) (0148-29) (0163-4) (0189-4) (0207-2) (0215-4) (0242-12) (0246-6) (0265-10) (0265-20) (0265-3) (0270-1) (0270-11) (0272-6) (0277-8) (0279-1) (0280-5) (0285-13) (0285-7) (0286-19) (0286-38) (0289-3) (0291-10) (0291-9) (0296-36) (0323-10) (0325-3) (0325-4) (0326-12) (0326-13)

## **B. General Aging and Degradation Comments**

The NRC received comments about a number of general safety issues regarding spent nuclear fuel aging and degradation. The GEIS will analyze the environmental impacts from the continued storage of spent nuclear fuel in spent fuel pools and in dry casks. The GEIS will also evaluate impacts from accidents, as well as impacts from aging and degradation of spent fuel storage systems.

Comments: (0001-3) (0004-18-10) (0004-25-6) (0005-10-1) (0005-11-3) (0005-16-2) (0038-6) (0049-6) (0069-1) (0083-2) (0091-1) (0119-7-4) (0131-1) (0148-28) (0148-37) (0148-8) (0150-1) (0196-3) (0239-1) (0244-4) (0271-9) (0278-3) (0282-1) (0286-100) (0286-107) (0286-39) (0286-41) (0286-62) (0286-63) (0286-65) (0286-68) (0296-26) (0325-12)

## **C. Spent Fuel Pools**

The NRC received a number of comments regarding the impacts of continued storage in spent fuel pools, including storage under various design conditions (such as low- and high-density pool storage). The GEIS will consider the environmental impacts of continued storage in spent fuel pools, including leaks, fires, floods, severe weather events, security concerns, and high-burnup fuel. The Waste Confidence GEIS is a generic analysis of environmental effects and cannot place specific requirements on nuclear power plants. Therefore, imposing requirements on a specific licensee, requiring all licensees to use low-density open-frame layouts, or requiring licensees to move fuel out of the pools after 5 years is outside the scope of this analysis.

Comments: (0004-13-11) (0004-14-7) (0004-18-1) (0004-20-3) (0004-20-5) (0004-25-13) (0004-26-1) (0004-4-5) (0004-7-5) (0004-7-7) (0004-8-4) (0005-5-10) (0005-5-2) (0005-5-3) (0005-5-4) (0005-5-9) (0008-2) (0008-3) (0009-6) (0027-1) (0030-1) (0030-2) (0037-5) (0038-2) (0038-4) (0038-5) (0044-1) (0052-1) (0055-1) (0055-4) (0061-2) (0061-4) (0061-5) (0062-5) (0062-7) (0062-8) (0063-4) (0063-5) (0064-5) (0065-2) (0065-4) (0065-5) (0066-2) (0066-4) (0066-5) (0067-2) (0068-1) (0068-5) (0068-7) (0069-6) (0069-7) (0070-1) (0071-5) (0071-6) (0072-7) (0072-8) (0074-2) (0076-2) (0076-4) (0077-1) (0080-3) (0080-5) (0080-6) (0084-2) (0084-3) (0087-1) (0087-3) (0087-5) (0087-7) (0092-7) (0093-3) (0093-5) (0093-6) (0097-1) (0105-4) (0108-1) (0112-1) (0118-3-4) (0118-4-2) (0118-7-4) (0118-8-1) (0118-8-2) (0118-8-4) (0119-10-1) (0119-6-6) (0119-6-8) (0148-13) (0148-15) (0148-17) (0148-18) (0148-21) (0148-22) (0148-23) (0148-25) (0148-26) (0148-4) (0148-9) (0167-1) (0187-3) (0189-3) (0189-5) (0194-2) (0207-1) (0211-1) (0221-2) (0226-1) (0238-1) (0241-4) (0242-10) (0242-11) (0242-6) (0246-9) (0260-3) (0263-14) (0263-25) (0265-27) (0266-1) (0267-2) (0267-3) (0269-23) (0269-24) (0269-3) (0270-3) (0270-4) (0270-6) (0272-5) (0272-8) (0273-9) (0275-8) (0277-4) (0281-5) (0281-7) (0284-11) (0285-8) (0286-10) (0286-105) (0286-106) (0286-108) (0286-109) (0286-110) (0286-



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#### **D. Generation of Low-Level Waste**

The NRC received a comment about the consideration of low-level radioactive waste in the GEIS. The potential environmental impacts of low-level radioactive waste generation, management, and disposal caused by continued storage will be addressed in the GEIS.

Comment: (0285-12)

### **B12. Comments Concerning Accidents**

#### **A. General Comments About Accident Analysis**

The NRC received comments requesting that the GEIS consider the environmental impacts of accidents at nuclear facilities. The GEIS will analyze the risk and possible consequences of accidents during continued storage of spent nuclear fuel. The GEIS will consider accidents caused by equipment failures, man-made hazards, and natural phenomena hazards, such as earthquakes and floods. The GEIS will not analyze the impacts of nuclear reactor accidents or the impacts of spent fuel storage accidents during the licensed life for operation of a reactor. The NRC analyzes these environmental impacts in site-specific licensing proceedings. The Waste Confidence environmental review is a generic analysis of the environmental impacts of continued storage.

Comments: (0026-1) (0029-1) (0037-6)

#### **B. Lessons Learned from the Fukushima Dai-ichi Nuclear Accident in Japan**

The NRC received comments requesting that the GEIS include in its analysis consideration of the March 11, 2011 Fukushima Dai-ichi nuclear accident and lessons learned from that event. These comments also outline, in light of the Fukushima accident, several possible accidents caused by natural and man-made events and request that the GEIS consider these possible accidents. The NRC also received comments concerning accident risk at specific nuclear power plant sites. One comment stated that the MELCOR Accident Consequence Code Systems 2 (MACCS2) software used by the NRC was outdated considering the lessons learned from Fukushima.

The GEIS will describe in a generic manner the environmental impacts of postulated accidents during continued storage of spent nuclear fuel. This includes accidents caused by equipment failures, man-made hazards, and natural phenomena hazards, such as earthquakes and floods. The GEIS will describe both preventive and mitigating plant design features and response measures. The GEIS will also describe the NRC's responses to lessons learned from the Fukushima Dai-ichi nuclear accident, as they relate to the continued storage of spent nuclear fuel.

Comments: (0001-4) (0004-17-2) (0004-17-3) (0004-18-2) (0004-26-2) (0005-5-11) (0021-1) (0038-3) (0055-5) (0056-2) (0061-3) (0062-9) (0065-6) (0068-8) (0072-9) (0087-2) (0087-4) (0105-3) (0106-2) (0107-7) (0111-2) (0118-9-6) (0148-12) (0148-38) (0156-1) (0194-3) (0246-4) (0269-26) (0269-27) (0271-23) (0272-12) (0285-9) (0286-5) (0291-19) (0307-2) (0315-1) (0326-9)

### **C. General Comments About Accidents**

The NRC received comments requesting that the GEIS include consideration of the risk and potential consequences of accidents caused by equipment failures, man-made hazards, and natural phenomena hazards, such as earthquakes and floods. Some of these comments raised concerns about site-specific accident risks and acts of terrorism. Some of these comments also requested that the GEIS include consideration of accidents that the NRC currently addresses in nuclear power plant design and operation, such as the risk of particular reactor design features or accidents caused by natural phenomena at an operating reactor at a particular site. The GEIS will generically consider the risk and potential consequences of accidents and acts of terrorism in its analysis of continued storage of spent nuclear fuel. The GEIS will not address these impacts during the licensed life for operation of a reactor.

Comments: (0004-23-5) (0004-25-9) (0005-3-2) (0005-7-2) (0035-4) (0053-5) (0055-8) (0058-8) (0118-17-1) (0118-2-5) (0129-4) (0192-1) (0196-1) (0237-4) (0265-14) (0269-25) (0275-9) (0285-16) (0286-24) (0286-40) (0296-30) (0310-1) (0316-1) (0323-7)

### **D. Dry Cask Accident Risks**

The NRC received comments requesting that the GEIS analyze the risk and potential consequences of dry cask accidents caused by natural events, including flooding and earthquakes. Several commenters noted that their concerns stemmed, in part, from the 2011 earthquake in central Virginia that affected North Anna Nuclear Generating Station and the 2011 nuclear accident at Fukushima Dai-ichi in Japan. Some commenters raised these concerns with respect to specific nuclear power plant sites such as Diablo Canyon Power Plant.

The GEIS will consider the potential for environmental effects of natural phenomena hazards, including flooding and earthquakes, on dry cask fuel storage during continued storage.

Comments: (0004-15-3) (0005-7-3) (0062-13) (0067-6) (0068-12) (0072-12) (0148-30) (0187-4) (0189-6) (0207-4) (0242-13) (0295-4) (0296-21) (0326-14) (0328-1)

### **E. Spent Fuel Pool Accidents**

The NRC received comments recommending that the GEIS analyze accident scenarios involving criticality of spent fuel pools, loss of pool coolant, and the potential for spent fuel pool leaks and fires due to natural phenomena or as the result of loss of power. Some commenters raised concerns regarding the risk of spent fuel pool accidents at specific sites. The GEIS will apply current data and information to its generic assessment of the potential impacts of accidents involving spent fuel pools, including criticality, loss of coolant, and spent fuel pool leaks and fires. The GEIS will generically analyze the potential impacts of accidents.

Comments: (0058-1) (0058-2) (0087-6) (0118-9-5) (0180-1) (0272-4) (0277-5) (0296-24) (0326-10) (0329-1) (0332-1)

#### **F. Accident Scenario Bounding Estimates**

The NRC received comments requesting the use of bounding values or worst-case scenarios for accident frequencies and consequences. The NRC plans to use existing information to generically assess accidents by reviewing the evaluations in other generic environmental impact statements and site-specific EAs and EISs. This approach follows the Commission's direction in Staff Requirements Memorandum for COMSECY-12-0016, "Approach for Addressing Policy Issues Resulting from Court Decision to Vacate Waste Confidence Decision and Rule" (NRC 2012c) to "coordinate and take appropriate advantage of existing documents and studies, including through adoption and incorporation by reference." The appropriate use of existing information is sufficient to generically demonstrate the range of expected impacts from accidents that could occur from continued spent fuel storage. As with all NEPA analyses, the GEIS will analyze reasonably foreseeable events; the NRC will not analyze worst-case impacts.

Comments: (0106-3) (0244-14) (0286-52) (0286-56) (0325-10) (0325-11)

#### **G. Environmental Justice and Cultural Resources**

The NRC received comments requesting that the GEIS consider environmental justice and cultural resource impacts resulting from accidents caused by natural phenomena, including seismic events. One commenter raised these concerns in the context of nuclear power plant operation. Another commenter raised concerns about the risk of seismic accidents and the potential for impacts on environmental justice matters and cultural resources on the California coast.

The GEIS will analyze the potential impacts of accidents caused by equipment failures, and man-made and natural hazards. Accidents that occur during reactor operations are outside the scope of this review, which analyzes the impacts of continued storage of spent nuclear fuel. The GEIS will generically analyze the potential impacts of postulated accidents during continued storage.

Comments: (0284-5) (0284-6)

#### **H. Reactor Accidents Impacting Spent Nuclear Fuel**

The NRC received a comment recommending that the GEIS consider reactor accidents leading to spent fuel pool accidents. The NRC will consider the environmental impacts of accidents involving spent nuclear fuel at facilities that are beyond the licensed life for operation of the reactor. As part of its analysis, the NRC will consider various initiating events, both internal and external.

Comment: (0005-5-13)

## **I. Solar Flares**

The NRC received comments about a petition filed with the NRC on March 14, 2011 (PRM-50-96; ADAMS Accession No. ML110750145), that suggests a solar flare could potentially disable large portions of the U.S. electrical grid for an extended period of time. In response to the solar flare petition, the NRC will undertake a rulemaking, "Long-Term Cooling and Unattended Water Makeup of Spent Fuel Pools" (77 FR 74788, December 18, 2012). The NRC will evaluate impacts from natural events in the GEIS, including impacts from the loss of electrical power that can be caused by events like solar flares.

Comments: (0009-5) (0223-1)

### **B13. Comments Concerning Security and Terrorism**

The NRC received several comments requesting that the GEIS consider safety and safeguards in its analysis, including the potential impacts associated with acts of terrorism, theft, illegal diversion, attack, sabotage, cyber attacks, and other malevolent acts. Some commenters also requested that the GEIS consider vulnerabilities of a specific reactor design to malevolent acts. The GEIS will include safety and safeguards considerations during the continued storage period. The GEIS will generically analyze the potential impacts of credible malevolent act scenarios during the continued storage period. The Waste Confidence GEIS is a generic analysis of environmental effects and cannot place specific requirements on nuclear power plants.

Comments: (0004-11-3) (0004-24-1) (0004-25-14) (0035-2) (0037-2) (0061-6) (0119-6-5) (0125-1) (0127-3) (0148-19) (0148-20) (0246-8) (0262-3) (0275-12) (0286-30) (0286-98) (0296-38) (0296-39) (0323-8) (0334-1) (0004-6-6) (0005-5-5) (0062-12) (0067-5) (0068-11) (0072-11) (0118-11-3) (0118-2-9) (0118-7-3) (0118-8-5) (0265-19) (0271-17) (0286-99) (0323-5)

### **B14. Comments Concerning Cost Considerations**

The NRC received comments requesting that the GEIS analyze the impacts of the costs of and payment for continued storage. Some commenters also mentioned concerns regarding the cost of and payment for other stages of the nuclear fuel cycle, including reactor operation. The GEIS will assess the environmental impacts of costs of and payment for continued storage. The GEIS will not address the costs of and payment for other stages of the nuclear fuel cycle.

Comments: (0004-15-5) (0004-15-6) (0004-15-7) (0004-25-11) (0005-5-7) (0091-2) (0091-3) (0091-4) (0118-14-1) (0118-14-2) (0118-17-6) (0118-21-2) (0118-26-3) (0137-1) (0244-6) (0251-2) (0258-3) (0272-10) (0275-10) (0291-12) (0291-13) (0291-14) (0291-16) (0291-17) (0296-31) (0296-32) (0296-33)

### **B15. Comments Concerning Cumulative Impacts**

The NRC received comments requesting that the GEIS consider the cumulative impacts of continued storage, including the cumulative impacts of potential spent fuel pool leaks and fires. The GEIS will consider and evaluate the cumulative impacts that could occur from the incremental impact of continued spent fuel storage when added to past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal),

person, or entity undertakes these actions. The analysis will include an assessment of cumulative impacts to groundwater, surface water, public health and safety, and other relevant resource areas.

Comments: (0004-25-3) (0271-20) (0286-114) (0286-47) (0291-20)

## **B16. Comments Concerning Alternatives**

### **A. Generic Versus Site-Specific Approach**

The NRC received a number of comments on the use of a generic approach to assessing the potential environmental impacts of continued storage instead of preparing site-specific analyses of continued storage. Some commenters supported a generic approach, while others supported a site-specific analysis. Some commenters requested that the GEIS identify issues that cannot be resolved generically. A number of commenters questioned how a generic approach could be conducted for certain resource areas, including ecology, hydrology, geology, socioeconomics, environmental justice, accidents, and historic and cultural resources.

The courts have supported a generic evaluation of continued storage since the late 1970s (*Minnesota v. NRC*, 602 F.2d 412) (D.C. Cir. 1979), and the Court of Appeals for the D.C. Circuit recently noted that a generic assessment was an acceptable way to evaluate the environmental impacts of continued storage (*New York v. NRC*, 681 F.3d 471) (D.C. Cir. 2012). Examples of other NRC GEISs include nuclear power plant decommissioning (NUREG-0586, NRC 2002), nuclear power plant license renewal (NUREG-1437, NRC 2009a), and uranium recovery in-situ leach facility licensing (NUREG-1910, NRC 2009b).

Comments: (0004-10-4) (0004-12-7) (0004-15-2) (0004-22-4) (0004-23-6) (0004-25-7) (0004-27-3) (0004-4-9) (0004-5-3) (0004-6-3) (0009-10) (0009-2) (0009-3) (0009-7) (0075-2) (0075-3) (0118-4-3) (0118-6-1) (0118-6-2) (0119-7-6) (0165-3) (0200-1) (0228-1) (0263-16) (0263-17) (0263-7) (0265-15) (0268-9) (0272-1) (0272-9) (0275-16) (0275-18) (0275-2) (0281-1) (0281-10) (0286-48) (0286-49) (0286-50) (0286-51) (0286-85) (0286-86) (0288-4) (0291-6) (0296-12) (0296-16) (0321-13) (0321-17) (0321-3) (0321-4) (0321-16)

The NRC received one comment suggesting that groupings of reactors could be used to support a generic analysis. The NRC does not intend to group reactors by region or similar environmental characteristics. For this effort, the NRC plans to use existing information and data on environmental resources to create a baseline and an "envelope" of parameters and impacts for analysis in the GEIS.

Comment: (0004-6-4)

### **B. Alternatives**

The NRC received many comments on alternatives to the Waste Confidence rulemaking, including suggested alternatives such as stopping all NRC licensing activities, halting any further production of spent nuclear fuel, and shutting down all existing nuclear power plants. As Chairman Macfarlane noted in a December 5, 2012 letter (ADAMS Accession No. ML12319A309), the federal action is the update to the Waste Confidence rule. As noted in the same letter, one alternative to the proposed action is to not update the rule and to analyze these

impacts on a site-specific basis. The NRC is considering whether additional alternatives would be appropriate in the GEIS based upon the feedback it has received during the scoping comment period. The NRC will consider these comments as it develops the draft GEIS.

Comments: (0003-6) (0004-11-4) (0004-12-5) (0004-13-7) (0004-14-3) (0004-17-1) (0004-18-9) (0004-20-6) (0004-6-2) (0004-7-6) (0005-11-5) (0005-13-1) (0005-14-1) (0005-15-1) (0005-3-1) (0005-8-1) (0012-3) (0027-2) (0038-8) (0040-1) (0041-2) (0042-1) (0044-2) (0046-1) (0048-4) (0049-8) (0053-2) (0062-1) (0062-2) (0063-1) (0063-2) (0064-1) (0064-2) (0064-3) (0068-2) (0069-2) (0071-2) (0071-3) (0072-1) (0072-2) (0072-3) (0074-1) (0077-2) (0077-3) (0079-3) (0080-1) (0084-1) (0085-4) (0092-1) (0115-1) (0118-16-4) (0118-17-14) (0118-8-3) (0119-6-4) (0119-7-3) (0119-7-5) (0121-1) (0124-1) (0125-2) (0127-1) (0128-1) (0129-1) (0132-1) (0136-1) (0140-1) (0141-1) (0145-1) (0147-2) (0148-7) (0153-1) (0157-1) (0158-1) (0161-1) (0175-1) (0177-1) (0182-1) (0186-1) (0187-1) (0189-1) (0193-1) (0194-5) (0198-1) (0201-1) (0202-1) (0210-1) (0213-4) (0213-7) (0215-1) (0216-4) (0227-4) (0231-1) (0234-1) (0236-1) (0237-3) (0241-1) (0242-4) (0242-7) (0243-1) (0246-1) (0247-3) (0248-1) (0249-1) (0251-3) (0252-2) (0253-1) (0257-1) (0258-2) (0262-5) (0262-6) (0263-22) (0263-5) (0263-6) (0266-4) (0269-1) (0269-10) (0269-14) (0269-15) (0269-21) (0271-18) (0271-19) (0272-15) (0273-4) (0274-10) (0274-2) (0274-5) (0275-14) (0275-4) (0277-11) (0281-11) (0281-3) (0285-14) (0286-1) (0286-88) (0286-92) (0286-93) (0287-2) (0288-2) (0290-5) (0293-1) (0295-1) (0296-40) (0298-6) (0298-7) (0298-8) (0300-1) (0303-1) (0304-1) (0315-4) (0323-12) (0326-6) (0326-7) (0336-3)

### **C. The Yucca Mountain No-Action Alternative**

The NRC received comments regarding the use of the Yucca Mountain EIS (DOE 2002) no-action alternative analysis as a resource in the development of the GEIS. The Commission directed the staff to incorporate by reference existing studies and documents, including the DOE Yucca Mountain no-action alternative, in the development of the GEIS. Therefore, NRC staff will independently consider, to the extent applicable and reasonable, the information contained in the DOE's Yucca Mountain EIS when drafting the GEIS.

Comments: (0004-10-2) (0004-6-1) (0004-7-3) (0244-2) (0263-13) (0265-2) (0265-5) (0267-1) (0283-2) (0322-2) (0322-4)

### **D. Future Updates to the Waste Confidence Rule**

The NRC received one comment regarding when the NRC would be required to prepare future updates to the GEIS and the Waste Confidence rule. The NRC staff will identify the assumptions and bases of its analysis in the GEIS. After an action is finalized, NRC will consider revisiting this analysis when warranted. If, in the future, changes in circumstances or information arise that challenge any results codified in an updated 10 CFR § 51.23, then interested parties may challenge those conclusions in site-specific licensing processes under 10 CFR § 2.335(b). In addition, an interested party may petition the NRC to change its regulations under 10 CFR § 2.802. The NRC will discuss future updates to the Waste Confidence GEIS and rule in the *Federal Register* notice for the proposed rule.

Comment: (0272-2)

## **B17. Comments Concerning Evaluation Scenarios**

### **A. New Requirements and Technologies**

The NRC received numerous comments about the adoption or development of specific technologies or requirements for dry cask storage, such as HOSS, retrievable storage in a repository, or other as yet undeveloped technologies and regulatory requirements. The commenters expressed their beliefs that these new technologies or additional requirements would improve the security and safety of spent nuclear fuel storage. For the purposes of its environmental analysis, the GEIS scenarios will assume that the current state of technology remains the same throughout the time periods analyzed. Further, the GEIS is not a licensing action. It cannot impose new storage requirements. The scope of the Waste Confidence GEIS will be limited to an assessment of the generic impacts of continued storage. With regard to HOSS, independent of the Waste Confidence rulemaking, the NRC is already considering implementing revised security requirements as part of the ongoing ISFSI security rulemaking effort. The rulemaking effort is described in the December 16, 2009, *Federal Register* notice (74 FR 66589), "Draft Technical Basis for Rulemaking Revising Security Requirements for Facilities Storing SNF and HLW; Notice of Availability and Solicitation of Public Comments."

Comments: (0004-11-2) (0004-14-5) (0004-14-8) (0004-18-3) (0004-25-12) (0005-5-12) (0038-9) (0043-4) (0058-4) (0058-7) (0062-4) (0063-3) (0064-4) (0065-1) (0066-1) (0067-1) (0068-4) (0069-4) (0071-4) (0072-5) (0076-3) (0077-4) (0080-2) (0092-3) (0093-2) (0095-2) (0105-2) (0118-8-6) (0134-1) (0141-2) (0147-1) (0148-24) (0148-27) (0152-4) (0163-2) (0163-5) (0180-2) (0187-2) (0189-2) (0194-1) (0195-1) (0198-2) (0207-3) (0215-2) (0227-3) (0238-2) (0241-2) (0242-9) (0256-2) (0262-7) (0265-22) (0266-2) (0269-22) (0270-2) (0271-24) (0273-10) (0273-12) (0281-8) (0286-42) (0286-104) (0286-33) (0288-3) (0289-1) (0293-3) (0296-34) (0296-37) (0314-1) (0315-3) (0323-11) (0326-8) (0327-1) (0336-4)

### **B. Movement of Spent Nuclear Fuel to Dry Cask Storage**

The NRC received comments asking the NRC to require licensees to move spent nuclear fuel from spent fuel pools to dry cask storage after a certain, limited period of time (for example, some commenters suggested that pool storage be capped at 5 years). The GEIS is not a licensing action, and the NRC cannot impose new requirements or regulations on the duration of spent fuel pool storage through this action. The NRC is separately considering expedited transfer of spent fuel from spent fuel pools as part of lessons learned from the March 11, 2011 Japan earthquake and subsequent tsunami.

Comments: (0003-1) (0058-3) (0058-6) (0062-6) (0064-6) (0065-3) (0066-3) (0067-3) (0068-6) (0069-5) (0072-6) (0076-5) (0080-4) (0089-1) (0092-4) (0093-4) (0139-1) (0158-3) (0198-3) (0198-4) (0215-3) (0277-7) (0285-10) (0295-2) (0296-35) (0323-9)

### **C. Reracking of Spent Fuel Pools**

The NRC received comments asking the NRC to require licensees to adopt low-density spent fuel pool configurations. The GEIS is not a licensing action, and the NRC cannot impose new requirements or regulations on the density of spent fuel pool storage. Further, the NRC has

previously reviewed license amendments to approve higher density storage in spent fuel pools, and the NRC is not aware of any new information that would cause it to reconsider this position.

Comments: (0118-11-4) (0119-7-2) (0262-8)

#### **D. Away-From-Reactor Storage**

The NRC received comments on whether away-from-reactor storage, which includes consolidated interim storage, should be considered in the GEIS. The NRC will evaluate the environmental impacts of spent fuel storage at an away-from-reactor storage facility as part of the GEIS. Should any away-from-reactor storage facility be proposed at some point in the future, the NRC will conduct a site-specific NEPA assessment as part of the licensing process for that proposed facility.

Comments: (0004-10-5) (0004-9-5) (0096-2) (0180-3) (0204-2) (0241-3) (0259-5) (0263-24) (0265-25) (0282-6) (0293-4)

#### **E. Maintenance and Institutional Controls**

The NRC received a number of comments on the topic of maintenance and institutional controls over the longer timeframes that will be considered in the GEIS, including whether the federal government would be held responsible for the maintenance of these institutional controls and whether future generations would have the knowledge and capability to effectively manage spent nuclear fuel storage. The NRC believes it is reasonable to assume that licensees remain responsible for the spent nuclear fuel stored on their sites and that institutional controls and, specifically, continued oversight by the NRC will remain in place for the duration of the scenarios under evaluation. However, the GEIS will include a discussion of the environmental impacts associated with the loss of institutional controls.

Comments: (0004-9-3) (0004-9-4) (0095-3) (0118-17-7) (0204-1) (0233-4) (0244-10) (0244-13) (0244-16) (0244-19) (0244-8) (0244-9) (0259-4) (0259-6) (0271-11) (0280-6) (0280-7) (0286-11) (0286-27) (0286-29) (0286-73) (0286-80) (0286-81) (0291-18) (0325-2)

#### **F. Spent Mixed Oxide (MOX) Fuel**

The NRC received a number of comments on the inclusion of MOX fuel in the GEIS. Because production and use of MOX fuel is reasonably foreseeable, it is within the scope of the GEIS and will be included in the assessment of environmental impacts of continued storage. MOX fuel was produced and used in the United States before the mid-1970s, and spent MOX fuel remains in storage at multiple facilities as part of the U.S. inventory of spent nuclear fuel. MOX fuel is not currently being produced in the United States; however, there is an application pending before the NRC for Shaw AREVA MOX Services (formerly Duke COGEMA Stone & Webster) to manufacture MOX at the Savannah River Site (Shaw/AREVA 2010).

Comments: (0004-18-5) (0004-26-4) (0118-17-12) (0265-7) (0281-9) (0288-5) (0301-1) (0325-5)



### **G. Repackaging Spent Nuclear Fuel**

The NRC received comments on the repackaging of spent nuclear fuel. Repackaging will be considered in the GEIS. Two of the three scenarios that the NRC now plans to consider in the GEIS will assume that the spent nuclear fuel needs to be repackaged. The GEIS will assume that a DTS, or a facility with equivalent capability, will eventually be constructed to enable retrieval of spent nuclear fuel for inspection or repackaging. A DTS would allow for repackaging at ISFSI-only sites and provide management flexibility at all dry storage sites by enabling repackaging without the need to build a new pool. The NRC will assume in its GEIS analyses that the need for DTS facilities will increase over time as the duration and quantity of fuel in dry storage increases.

Comments: (0005-5-8) (0096-5) (0118-2-10) (0244-12) (0270-5) (0280-4) (0291-11)

### **H. Advanced Nuclear Reactor Designs**

The NRC received comments on advanced reactor technologies, such as Generation IV power plants, and their inclusion in the GEIS. The GEIS will not consider spent nuclear fuel types that might be generated by speculative technologies, such as sodium-cooled, fast-neutron reactors or fusion reactors. The GEIS will evaluate the environmental impacts associated with the continued storage of commercial spent nuclear fuel, including both low- and high-burnup low-enriched uranium and reasonably foreseeable fuel types, such as uranium-plutonium MOX fuels at low and high burnups.

Comments: (0118-17-11) (0286-102)

### **I. Timeframes for GEIS Scenarios**

The NRC received comments on the timeframes for the various GEIS scenarios, including comments on when the NRC should assume a repository becomes available and the long decay times associated with spent nuclear fuel. The GEIS will specify the timeframes and repository availability assumptions for any scenarios analyzed. The NRC will consider these comments as it continues to develop the draft GEIS and proposed rule.

Comments: (0004-4-7) (0004-6-5) (0023-1) (0096-1) (0107-2) (0107-6) (0118-12-2) (0233-2) (0244-5) (0244-7) (0246-12) (0263-23) (0263-8) (0264-4) (0265-6) (0269-13) (0270-10) (0272-13) (0272-14) (0274-6) (0284-10) (0286-12) (0286-121) (0286-13) (0286-16) (0286-61) (0286-90) (0291-3) (0292-1) (0294-2) (0325-1)

### **J. Permanent Disposal**

The NRC received comments that questioned whether disposal is still the national policy for spent nuclear fuel or recommended other disposal solutions, such as permanent onsite disposal. Some commenters expressed concern that the continued storage facilities would become de facto disposal sites. The GEIS will reflect that disposal in a repository continues to be the national policy.

Comments: (0004-9-1) (0107-3) (0118-16-2) (0118-16-3) (0251-1) (0256-1) (0258-1) (0259-1) (0265-23) (0273-6) (0300-3)

### **K. Timeframe for Reviewing Waste Confidence**

The NRC received one comment suggesting that perpetual storage could be addressed by requiring periodic revisiting of Waste Confidence. As with any NRC action, the Commission would consider revisiting and updating the GEIS and rule if it becomes apparent that an update is needed.

Comment: (0244-15)

### **L. No-Repository Scenario**

The NRC received comments about the inclusion of a no-repository scenario in the GEIS and whether the no-repository scenario could be described as a potential mitigating measure. The GEIS will include a no-repository scenario.

Comments: (0004-16-2) (0004-20-4) (0004-4-1) (0004-4-8) (0037-1) (0037-3) (0107-4) (0118-12-1) (0118-16-1) (0148-32) (0226-3) (0233-1) (0244-17) (0244-18) (0244-3) (0260-2) (0260-4) (0263-11) (0263-12) (0268-3) (0270-9) (0271-10) (0275-23) (0281-13) (0285-18)

### **M. Safety**

The NRC received comments that questioned the continued safety of spent nuclear fuel storage either due to lack of appropriate technology, societal hurdles, the need for robust studies to ensure safe storage, or the length of time spent nuclear fuel needs to be safely stored. As a regulatory agency, the NRC does not develop new technologies or direct public policy regarding the management of spent nuclear fuel. However, the NRC has regulations and requirements to ensure protection of public health and safety and the environment, and is developing the GEIS to evaluate the impacts of continued storage. These comments will be considered in the development of the GEIS.

Comments: (0004-4-2) (0033-1) (0048-3) (0069-3) (0073-1) (0118-3-1) (0119-6-3) (0151-1) (0154-1) (0160-1) (0162-1) (0183-1) (0195-2) (0208-1) (0218-1) (0219-1) (0275-13) (0277-2) (0321-6) (0336-2)

### **N. Timeframe to Develop Repositories**

The NRC received comments that questioned whether the GEIS would consider the time needed to develop multiple repositories. The GEIS will consider the time necessary to develop sufficient repository capacity for a reactor's spent nuclear fuel, which will include a discussion of the statutory repository limit and the potential need for more than one repository.

Comments: (0118-13-2) (0118-17-9) (0119-10-2)

### **O. Scope of Scenarios**

The NRC received comments on the scope of the scenarios that will be considered in the GEIS. For example, some of these commenters suggested that the GEIS scenarios consider the possible expansion of nuclear power instead of a "no growth" scenario where nuclear power

continues to supply about 20 percent of the nation's electricity needs. The NRC will consider these comments as it develops the GEIS.

Comments: (0107-5) (0286-28) (0286-31) (0286-32) (0286-35)

#### **P. Relationship Between Continued Storage and Repository**

The NRC received one comment questioning the relationship between continued storage and repository design. This relationship will not be assessed in the GEIS, because it is not relevant to the analysis that the NRC must conduct to assess the environmental impacts of continued storage. Any future repository design would need to account for changes to the spent nuclear fuel due to decay and aging.

Comment: (0271-12)

### **B18. Comments Concerning NEPA Process**

#### **A. General Schedule and Public Participation**

The NRC received many comments concerning the Waste Confidence GEIS proposed schedule and public participation opportunities. These comments expressed both support for and criticism of the NRC's 24-month schedule to complete the GEIS. The Waste Confidence rulemaking is a high priority for the Commission; there are resources and energy being put into its completion within the 2-year timeframe while ensuring ample public involvement. The staff's schedule for the previous effort was based on fewer resources, fewer staff members, and a variety of new issues related specifically to the long-term update, which is not at issue in this rulemaking. The current schedule for the GEIS will enable the NRC to conduct the hard look required by NEPA and optimize public participation in the process.

With regard to the duration of the scoping comment period, as noted in a letter dated December 5, 2012 from NRC Chairman Macfarlane, the 70-day Waste Confidence GEIS scoping period was consistent with, or longer than, scoping comment periods for other NRC licensing actions (ADAMS Accession No. ML12319A309). Further, there will be another opportunity for public comment when the draft GEIS and proposed rule are issued. During the comment period for these documents, the NRC plans to hold regional and webcast public meetings to discuss the conclusions in the draft GEIS, and solicit public comments on the draft GEIS and proposed rule.

Comments: (0001-2) (0004-10-1) (0004-12-10) (0004-12-6) (0004-14-2) (0004-14-6) (0004-19-1) (0004-20-1) (0004-22-1) (0004-22-3) (0004-23-2) (0004-27-6) (0004-7-1) (0004-8-1) (0005-7-5) (0005-9-2) (0005-9-3) (0009-8) (0010-1) (0011-1) (0011-2) (0012-1) (0012-2) (0013-1) (0013-2) (0014-1) (0015-1) (0015-2) (0016-1) (0017-1) (0017-2) (0018-1) (0019-1) (0019-3) (0020-1) (0028-1) (0029-2) (0029-3) (0035-3) (0038-10) (0041-1) (0041-4) (0043-1) (0045-2) (0050-2) (0053-1) (0055-6) (0059-2) (0059-4) (0060-1) (0061-1) (0075-1) (0076-1) (0078-1) (0086-1) (0086-2) (0086-5) (0091-5) (0098-1) (0099-1) (0100-1) (0103-1) (0104-1) (0104-3) (0111-1) (0114-2) (0118-2-3) (0118-21-1) (0118-23-2) (0118-25-3) (0119-6-1) (0119-6-2) (0119-7-1) (0120-1) (0148-2) (0148-3) (0152-3) (0216-1) (0216-2) (0217-1) (0223-3) (0228-2) (0237-5) (0242-2) (0242-3) (0247-2) (0252-3) (0263-1) (0263-20) (0264-1) (0265-1) (0268-2) (0269-8) (0271-5) (0273-2) (0273-8) (0276-2) (0276-3) (0281-4) (0288-6) (0290-1) (0290-2) (0296-10)

(0296-8) (0297-4) (0299-1) (0302-1) (0308-1) (0311-1) (0312-1) (0313-1) (0317-1) (0318-1) (0321-14) (0321-15) (0322-1) (0326-2) (0326-3) (0326-5)

### **B. Number of and Locations for Public Meetings**

The NRC received many comments about the number and locations of meetings to discuss the GEIS and proposed rule. During the comment period for the draft GEIS and proposed rule, the NRC plans to hold a number of public meetings across the country to allow stakeholders to interact with and hear directly from NRC staff. At least one of these meetings will be webcast and teleconferenced, which will allow interested people and organizations to participate in the meeting without having to travel. The NRC will consider the suggestions in these comments as it develops the public meeting schedule.

Comments: (0004-12-1) (0004-12-3) (0004-13-3) (0004-14-1) (0004-15-1) (0004-18-7) (0004-23-3) (0004-25-17) (0004-25-8) (0004-5-5) (0004-7-4) (0005-11-1) (0005-12-1) (0005-17-6) (0005-5-1) (0005-7-4) (0014-2) (0016-2) (0019-2) (0020-2) (0029-4) (0043-3) (0049-4) (0059-3) (0060-4) (0084-4) (0086-3) (0086-4) (0098-2) (0100-2) (0118-2-4) (0118-20-1) (0118-3-2) (0119-6-7) (0119-8-1) (0152-5) (0165-2) (0197-1) (0221-3) (0237-7) (0242-8) (0244-20) (0265-21) (0268-4) (0273-1) (0274-9) (0281-2) (0286-60) (0290-3) (0291-25) (0296-1) (0296-3) (0296-4) (0296-9) (0299-2) (0311-4) (0312-2) (0318-2) (0325-8) (0326-4)

### **C. Public Outreach**

The NRC received comments about the timing, locations, and form of its public outreach, including a comment describing difficulties with accessing the Internet-based meetings that were held as part of the scoping process. The NRC will consider these comments as it continues to refine its public outreach activities associated with the development of the GEIS. For example, in response to the comment outlining the difficulties experienced when searching for information on the Waste Confidence Directorate's website, the NRC reorganized the website so that a direct link to current public meeting information is available on the homepage of the site.

The NRC strives to conduct its regulatory responsibilities in an open and transparent manner, consistent with the NRC Approach to Open Government. The NRC appreciates feedback regarding its communications with the public and will consider that feedback moving forward.

Comments: (0004-12-8) (0114-3) (0118-23-1) (0118-24-1) (0118-24-2) (0118-25-1) (0118-25-2) (0118-25-4) (0118-26-1) (0118-27-1) (0118-3-5) (0119-11-2) (0119-12-1) (0119-13-1) (0273-7) (0288-7) (0297-1)

### **D. Reliance on Existing Data and Documents**

The NRC received comments regarding reliance on existing data and documents in the GEIS. As it develops the GEIS, the NRC will actively seek out information sources that may be relevant and helpful in the preparation of the GEIS, including previous Waste Confidence rulemakings, EAs and impact statements, and technical reports, as appropriate. These documents will be clearly referenced or cited in the GEIS, and members of the public will be able to comment on the NRC's decisions regarding existing data and documents during the comment period for the draft GEIS.

Comments: (0004-10-3) (0004-10-6) (0004-19-2) (0004-20-2) (0004-27-4) (0004-27-5) (0004-7-2) (0118-13-1) (0237-2) (0237-6) (0246-3) (0263-10) (0263-19) (0263-2) (0264-3) (0274-7) (0283-5) (0283-6) (0285-3) (0286-3) (0291-8) (0298-4) (0302-2) (0302-3) (0335-1)

### **E. Federal Register Notice on GEIS Scoping Period**

The NRC received many comments about the *Federal Register* notice announcing the GEIS scoping period (77 FR 65137, October 25, 2012, "Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation"). These comments generally requested that NRC withdraw the *Federal Register* notice because the notice is legally deficient and that the proposed action and alternatives were absent from the notice. These comments mirror a number of informal requests to the Commission (i.e., comments not submitted through formal comment routes) to withdraw the Waste Confidence scoping notice and to extend the public comment period. The Commission also received a letter dated November 8, 2012 (ADAMS Accession No. ML12314A345), from Diane Curran, Mindy Goldstein, and Geoffrey Fettus, on behalf of 25 organizations and individuals, expressing concern about the NRC's scoping notice. Following receipt of this letter, the Waste Confidence Directorate (via WCO Outreach@nrc.gov) received approximately 2,300 identical e-mails that expressed support for the letter. These e-mails were not considered as formal scoping comments, but the issues raised in the e-mails are addressed in this response.

NRC Chairman Allison Macfarlane responded to the November 8 letter on behalf of the Commission (ADAMS Accession No. ML12319A309; December 5, 2012). In her letter, the Chairman reaffirmed that the federal action under consideration is an update to the Waste Confidence rule. The Chairman also noted that the scoping notice complies with the NRC's regulations and that an extension of the scoping period was not warranted.

Finally, one comment discussed the content of a Record of Decision. The NRC's Record of Decision is not required to be completed until the Commission concludes its final GEIS (10 CFR § 51.102). The NRC's final rule and GEIS will include a Record of Decision that complies with the NRC's NEPA requirements.

Comments : (0004-11-1) (0004-12-2) (0004-12-4) (0004-12-9) (0004-13-1) (0004-13-2) (0004-18-8) (0004-22-2) (0004-23-1) (0004-25-1) (0004-27-2) (0005-11-2) (0005-12-2) (0005-17-2) (0043-2) (0045-1) (0047-1) (0047-2) (0049-1) (0049-2) (0049-3) (0049-5) (0050-1) (0051-1) (0058-10) (0058-9) (0060-2) (0060-3) (0083-1) (0083-3) (0083-4) (0085-1) (0085-2) (0085-3) (0107-1) (0118-2-1) (0118-2-2) (0118-5-1) (0147-3) (0216-3) (0263-4) (0266-5) (0269-9) (0271-1) (0271-21) (0271-3) (0271-4) (0271-7) (0271-8) (0273-3) (0275-6) (0296-2) (0298-1) (0298-5) (0299-3) (0307-1) (0310-2) (0311-2) (0311-3) (0315-5) (0318-3) (0319-1) (0319-2) (0321-10) (0321-12) (0326-1)

### **F. Tribal Consultation**

The NRC received comments regarding tribal consultation. The NRC will comply with relevant laws, regulations, and Executive Orders (including Executive Order 13175 [65 FR 67249]) to ensure that interested tribes are aware of and involved in the development of the GEIS.

For example, as part of the NRC's scoping efforts, letters about the scoping process for the GEIS were sent to federally recognized tribes that live within 50 miles of a nuclear power plant,

to tribes that requested to receive advanced notification of shipments of spent nuclear fuel and high-level nuclear waste under 10 CFR Parts 71 and 73, and to tribes that expressed interest in the NRC's Yucca Mountain application activities. The NRC will continue its outreach efforts with Native American tribes interested in this rulemaking, encourage their participation, and be respectful of tribal sovereignty.

Comments: (0004-4-6) (0284-12) (0284-8) (0321-18)

### **G. Issues Identified by the Court of Appeals for the D.C. Circuit**

The NRC received comments regarding the scope of the GEIS with respect to the issues identified by the Court of Appeals for the D.C. Circuit and previous Waste Confidence rulemakings. The GEIS will include, but not be limited to, the three issues identified by the court. Further, the GEIS will consider the issues discussed in previous Waste Confidence rulemakings, but will expand the analysis of those issues as appropriate for a GEIS. The NRC will ensure that its analysis complies with the requirements of NEPA.

Comments: (0004-8-2) (0009-9) (0244-1) (0259-2) (0263-9) (0264-2) (0267-5) (0268-8) (0283-3) (0291-4) (0291-5)

### **H. Guidance Documents for Development of GEIS**

The NRC received comments regarding which, if any, NRC guidance documents would be used to develop the GEIS. The GEIS will follow, to the extent practicable, the applicable guidance in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs: Final Report" (NRC 2003). This document is available on the NRC website at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1748/>.

Comments: (0004-4-3) (0283-1) (0321-19)

### **I. Level of Review**

The NRC received comments requesting that the NRC conduct a thorough environmental review of spent fuel storage, including impacts at particular NRC-licensed sites. The Waste Confidence GEIS will be developed in accordance with NRC's regulations that implement NEPA at 10 CFR Part 51, and will provide an assessment of the environmental impacts of continued storage. The GEIS will evaluate these impacts generically, and thus will not evaluate specific sites.

Comments: (0032-1) (0035-1) (0037-4) (0038-1) (0123-1) (0126-1) (0142-1) (0164-1) (0227-1) (0232-1) (0237-1) (0284-9) (0286-103)

### **J. Site-Specific Analyses**

The NRC received comments requesting that the NRC require a separate site-specific environmental analysis before it licenses or relicenses a nuclear power plant. A site-specific environmental analysis is required prior to licensing or relicensing for each application received by the NRC. The GEIS will be an environmental analysis that looks at the continued storage of

spent nuclear fuel on a generic basis. The Waste Confidence rulemaking and supporting GEIS will not license or relicense any reactor or spent nuclear fuel storage facility.

Comments: (0152-2) (0166-1) (0170-1) (0172-2) (0178-1) (0184-1) (0191-1)

#### **K. Content and Format**

The NRC received a comment requesting that the NRC provide a detailed discussion of the comments and the basis for the NRC's final determination regarding the scope of the GEIS. The draft GEIS will reflect the NRC's determinations regarding the scope of the GEIS. Members of the public will be able to comment on the draft GEIS, and the NRC will provide detailed responses to those comments as part of the final GEIS. The scope of the final GEIS could change from the draft as a result of public comments.

Comment: (0275-22)

#### **L. Authority for Development of a GEIS**

The NRC received a comment requesting citations to the authority that allows for the development of a GEIS. The courts have supported a generic evaluation of continued storage since the late 1970s (*Minnesota v. NRC*, 602 F.2d 412) (D.C. Cir. 1979), and the Court of Appeals for the D.C. Circuit recently noted that a generic assessment was an acceptable way to evaluate the environmental impacts of continued storage (*New York v. NRC*, 681 F.3d 471) (D.C. Cir. 2012). Examples of other NRC GEISs include nuclear power plant decommissioning (NUREG-0586, NRC 2002), nuclear power plant license renewal (NUREG-1437, NRC 2009a), and uranium recovery in-situ leach facility licensing (NUREG-1910, NRC 2009b).

Comment: (0246-2)

#### **M. Lessons Learned on Previous Waste Confidence Efforts**

The NRC received a comment suggesting NRC conduct a lessons learned analysis from previous Waste Confidence efforts. The NRC will consider past Waste Confidence experience in the development of the GEIS and proposed rule.

Comment: (0260-1)

#### **N. Availability of Information**

The NRC received many comments suggesting that adequate data are not available, significant uncertainties exist, or additional research is necessary on various issues, including MOX fuel and high-burnup spent fuel, before a Waste Confidence GEIS can be developed. The NRC believes there are numerous sources of the requisite technical data and information available to successfully complete the GEIS while meeting NEPA requirements.

The staff will adopt or incorporate by reference all or part of existing EISs, as appropriate. There are numerous other technical documents and reports on pertinent issues that can be used to support the necessary analyses in the Waste Confidence GEIS.

In preparing the GEIS, the NRC is mindful of the CEQ's "Guidance on Improving the Process for Preparing Efficient and Timely Reviews Under NEPA" (CEQ 2012), which encourages (i) straightforward and concise reviews of documentation that are proportionate to potential impacts and effectively convey the relevant considerations to the public and decision-makers in a timely manner while rigorously addressing the issue presented and (ii) coordination of appropriate existing documents and studies, which may be adopted and incorporated by reference. This guidance can be found at the CEQ's website:

[http://www.whitehouse.gov/sites/default/files/microsites/ceq/improving\\_nepa\\_efficiencies\\_06mar2012.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ceq/improving_nepa_efficiencies_06mar2012.pdf). The NRC will rely on accurate and high quality information to ensure the Waste Confidence GEIS contains a thorough and rigorous environmental impact analysis.

Comments: (0004-6-8) (0265-24) (0265-4) (0280-1) (0280-2) (0286-2) (0286-4) (0286-64) (0286-66) (0286-67) (0286-7) (0286-70) (0286-76) (0286-78) (0286-79) (0286-82) (0286-89) (0298-2) (0322-3) (0322-8)

The NRC received a comment requesting that research efforts evaluating transportation impacts be integrated with aging management programs. The NRC will consider a variety of information sources to support the GEIS.

Comment: (0004-9-2)

#### **O. Mitigation Alternatives**

The NRC received comments about its proposed methodology for considering mitigation alternatives. The Waste Confidence GEIS will evaluate environmental impacts and discuss mitigation that could reduce impacts to resources affected by continued storage of spent nuclear fuel.

Comments: (0275-15) (0284-7) (0286-8)

#### **P. Scope of the GEIS**

The NRC received a comment suggesting the scope of the Waste Confidence GEIS should be narrowly bounded. The GEIS will address the deficiencies identified by the recent decision by the Court of Appeals (*New York v. NRC*, 681 F.3d 471) (D.C. Cir. 2012). The NRC will be considering a variety of information sources to support the analyses in the GEIS. As applicable, this can include spent fuel storage and transportation regulatory programs, including available information from or about research and development efforts underway currently or that would be conducted in the future by the NRC, DOE, and the Electric Power Research Institute, and current information about aging management programs. The GEIS will only consider impacts resulting from actions and activities applicable to continued storage of spent nuclear fuel.

Comment: (0259-3)

The NRC received comments suggesting that the proposed action had a broader scope than described by the NRC. In particular, commenters requested that the scope include the cessation of all spent nuclear fuel generation and analysis of stopping future spent fuel generation in light of significant future uncertainty. While the GEIS will consider an indefinite storage scenario, the NRC does not agree with the commenters' description of the proposed



action. As Chairman Macfarlane noted in the December 5, 2012 letter to the commenter and others (ADAMS Accession No. ML12319A309), the federal action is the update to the Waste Confidence rule. As noted in the same letter, one alternative to the proposed action is to not update the rule and to analyze these impacts on a site-specific basis. The NRC is considering whether additional alternatives would be appropriate for consideration in the GEIS based upon the feedback it has received during the scoping comment period.

Comments: (0271-6) (0275-5)

#### **Q. National Historic Preservation Act**

The NRC received a comment requesting that the NRC comply with Section 106 of the National Historic Preservation Act (NHPA). The NRC will comply with the requirements of Section 106 of the NHPA through implementation of its NEPA requirements in 10 CFR Part 51 by considering these issues in the GEIS. Potential impacts to historic and cultural resources will be discussed in the GEIS. However, the Waste Confidence rulemaking does not identify specific sites for NRC licensing actions that would trigger the identification of historic properties and other steps in the Section 106 process. These activities would occur during site-specific licensing actions.

Comments: (0284-2) (0284-3)

#### **R. Relationship to Previous Long-Term Waste Confidence Effort**

The NRC received comments responding to its issuance of a December 2011 pre-scoping document, "Draft Report for Comment: Background and Preliminary Assumptions for an Environmental Impact Statement—Long-Term Waste Confidence Update" (NRC 2011a). This document relates to a separate initiative to look at spent fuel storage for more than the 60 years after the end of licensed life for operation considered in the 2010 Waste Confidence rulemaking (i.e., the "Long-Term Waste Confidence Update"). This is a separate project from the current effort to prepare a Waste Confidence GEIS and update the Waste Confidence rule. The long-term effort has been deferred until the NRC completes the current effort to prepare a GEIS and update the Waste Confidence rule. Comments received on the 2011 pre-scoping document were reviewed by the NRC staff to assess whether they are relevant to the current Waste Confidence update. Those comments, which were in response to a different, though related, effort, are not within the scope of this analysis and have not been captured in this scoping summary report. A summary of the comments can be found in Section A12 of this report, and a complete list of commenters on the pre-scoping document can be found in Section E.

Comments: (0005-9-1) (0259-7) (0321-20)

#### **S. Coordination with Other Agencies**

The NRC received two comments that identified the U.S. Navy as a resource for dealing with long-term storage of spent nuclear fuel. In developing the GEIS, the NRC will follow the Commission's direction to "coordinate and take appropriate advantage of existing documents and studies." This may include information from other federal agencies and government sources.

Comments: (0003-2) (0254-1)

## **B19. Comments Concerning Rulemaking Process**

### **A. Proposed Action**

The NRC received comments concerning the description of the proposed action that was published in the *Federal Register*. The proposed NRC action is a revision to the Waste Confidence rule (10 CFR § 51.23). The proposed revision to the rule will adopt into the NRC's regulations the generic assessment in the GEIS of the environmental impacts associated with the continued storage of spent nuclear fuel beyond the licensed life of a reactor and prior to ultimate disposal. The Waste Confidence rule is not a licensing action. It does not authorize the initial or continued operation of any nuclear power plant and does not authorize storage of spent nuclear fuel. Therefore, the licensing of specific reactors or storage facilities is not the purpose of this rulemaking or the proposed action. A separate NRC action is required before a reactor is licensed and before fuel can be stored after the expiration of a reactor's license at a specific site. The environmental analysis accompanying each of these actions to license or relicense a nuclear power plant would examine site-specific, no-action alternatives.

Comments: (0270-7) (0271-2) (0321-11)

### **B. Definition of Spent Nuclear Fuel**

The NRC received comments concerning the use of the term "spent nuclear fuel." The NRC defines spent nuclear fuel (or spent fuel) as "fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing," according to 10 CFR § 2.1105(b). The NRC will use the term "spent nuclear fuel" or "spent fuel" throughout the GEIS and the *Federal Register* notice for the rule.

Comments: (0281-12) (0288-1)

### **C. Scoping Comments**

The NRC received a comment asking whether there will be a comment period on this scoping summary report. This scoping summary report provides the scope for the forthcoming GEIS, as informed by public comments. The next opportunity for public comment will be when the NRC solicits input on the draft GEIS and proposed rule. The Waste Confidence GEIS will consider the environmental impacts of the continued storage of spent nuclear fuel for various timeframes, and the NRC will clearly define those timeframes as part of its analysis. The GEIS will define any technical terms that are used to support its analysis.

Comment: (0118-4-1)

### **D. Use of the Five Findings**

The NRC received comments concerning the historical Waste Confidence decision and the "Five Findings." The NRC will consider these comments as it prepares the *Federal Register* notice for the proposed rule, which will also address the Waste Confidence Decision.

Comments: (0263-21) (0263-3) (0270-8)

### **E. Document Availability**

The NRC received comments expressing concern about the availability of documents that will be used to support the GEIS and proposed rule. The NRC strives to conduct its regulatory responsibilities in an open and transparent manner, consistent with the NRC Approach to Open Government. The Waste Confidence GEIS and rule, if finalized, will be supported by a comprehensive, publicly available docket of supporting and informing materials. To the extent possible under existing laws and regulations, the NRC will disclose the documents that provide the basis for the GEIS and the rule. The NRC does not expect to rely on classified or sensitive documents in the GEIS, but must follow federal and NRC document requirements if it does. One comment suggests making non-NRC documents relevant to the Waste Confidence GEIS and rulemaking available on the NRC's Waste Confidence website (<http://www.nrc.gov/waste/spent-fuel-storage/wcd.html>). The NRC will consider its implementation.

Comments: (0148-1) (0275-21) (0283-4)

### **F. Hearing Request**

The NRC received comments requesting that the NRC use an adjudicatory hearing process for this rulemaking. The NRC does not agree that it is appropriate to convene an adjudicatory hearing for this rulemaking, nor does the NRC believe that the 10 CFR Part 2, Subpart L procedures are appropriate for this rulemaking. The NRC staff believes that the normal NEPA and rulemaking processes, including the scoping process and this scoping summary report, the comment response for the draft GEIS, and the notice-and-comment rulemaking process, allow for the ample public comment opportunities as well as the efficiencies the Commission required.

Comments: (0237-8) (0275-20)

### **G. Description of the Proposed Action**

The NRC received a comment disagreeing with the NRC's description of the proposed action, instead suggesting that the NRC should consider whether or not to allow nuclear power plants to continue to operate, given the absence of a disposal facility. The NRC disagrees with this characterization. The current Waste Confidence update will not result in the authorization to operate or construct any particular facility, or to generate nuclear waste. The Waste Confidence GEIS will resolve one piece of the NEPA analysis for reactor licensing and spent fuel storage facility licensing proceedings (i.e., storage of spent nuclear fuel beyond the licensed life of a reactor prior to disposal in a repository). The proposed action is the issuance of a final rule. One alternative is to not issue the rule and to consider these impacts on a case-by-case basis. The NRC is considering the many comments it received on possible alternatives to the Waste Confidence rulemaking. These alternatives will be described and analyzed in the GEIS, which will be available for public review and comment later this year.

Comment: (0275-1)

## **H. Major Federal Action**

The NRC received a comment that it has misunderstood the nature of the recent court opinion with respect to the nature of the major federal action for which the GEIS is being prepared. The NRC does not agree with the comment, nor with the commenter's interpretation of the court's opinion. The language cited by the commenter refers to Waste Confidence as a major federal action, noting Waste Confidence's role in individual licensing proceedings. However, the court neither found that Waste Confidence is a licensing action, nor that it authorizes the storage of spent nuclear fuel. Instead, the court noted that the Commission's approach to resolving environmental issues has been endorsed both by the U.S. Supreme Court and the D.C. Circuit Court of Appeals (*New York v. NRC*, 681 F.3d 471, 480) (D.C. Cir. 2012).

Comment: (0275-7)

## **I. Public Participation and Site-Specific Concerns**

The NRC received a comment asking how interested parties can raise site-specific concerns about high-density spent fuel pools. The GEIS will include a generic analysis of risks associated with the continued storage of spent nuclear fuel, including storage at spent fuel pools. Interested parties can raise concerns during the comment period associated with the GEIS.

Comment: (0004-5-4)

## **J. General Rulemaking Support**

The NRC received comments supporting the NRC scoping effort and schedule, assessment of the environmental impacts of extended spent fuel storage (including the "no repository" scenario), and utilization of a geologic repository as the disposal method. The comments do not provide any specific information related to the environmental effects of continued storage of spent nuclear fuel and will not be evaluated in the GEIS.

Comments: (0004-27-1) (0059-1) (0226-4) (0294-5)

## **K. General Rulemaking Opposition**

The NRC received comments expressing general opposition to the Waste Confidence rule and rulemaking process, including requests for Waste Confidence to be abolished. While the comments are useful for the NRC to understand public opinion about the rulemaking, the comments provide no information regarding the scope of the Waste Confidence environmental review and will not be evaluated.

Comments: (0048-1) (0115-2) (0121-3) (0124-2) (0127-2) (0128-2) (0128-3) (0129-2) (0145-3) (0148-39) (0152-1) (0157-2) (0161-2) (0165-1) (0166-2) (0172-1) (0178-2) (0236-2) (0247-1) (0262-4) (0269-11) (0290-4) (0305-1) (0321-2)

## **B20. Comments that are Out of Scope**

### **A. Fuel Cycle**

The NRC received comments suggesting that the GEIS consider the entire nuclear fuel cycle, including uranium mining and milling, fuel fabrication, reactor operation, and enrichment facilities. The focus of this GEIS is a generic assessment of the environmental impacts of continued storage. Assessing the environmental and health impacts associated with the entire uranium fuel cycle or with halting generation of additional radioactive waste is outside the scope of the analysis and will not be considered in the GEIS, although it is considered in other NRC analyses, including licensing actions and other generic analyses.

Comments: (0004-13-10) (0004-13-4) (0004-13-5) (0004-13-6) (0075-5) (0090-1) (0090-4) (0090-5) (0119-5-1) (0220-1) (0263-15) (0271-22) (0275-19) (0298-3)

The NRC received comments related to spent nuclear fuel disposal. Spent nuclear fuel disposal is outside the scope of the Waste Confidence analysis, which will consider the environmental impacts of continued storage prior to ultimate disposal. The development of a national repository, the licensing of Yucca Mountain or another repository site, environmental impacts associated with disposal in a repository, funding issues, recycling, and other waste disposal strategies are outside the scope of this GEIS.

Comments: (0246-11) (0269-12) (0276-1) (0286-122) (0286-14) (0286-18) (0286-77) (0286-91) (0322-5)

The NRC received comments on whether reprocessing, and high level waste derived from reprocessing, should be considered in the GEIS. The GEIS will not address the environmental impacts of construction, operation, and decommissioning of reprocessing facilities, including continued storage of high level waste derived from reprocessing, because there are no operating reprocessing facilities in the United States. In addition, any commercial high level waste is currently being managed by the Department of Energy.

Comments: (0004-14-10) (0118-18-1) (0119-10-3) (0148-35) (0148-6) (0269-18) (0273-13) (0285-15) (0285-19) (0286-21) (0286-94) (0294-3) (0314-3) (0336-5)

The NRC received a comment asking about the decommissioning process for spent fuel pools. The decommissioning of spent fuel pools will be assessed as part of the NRC's review of decommissioning activities at a reactor site. A description of decommissioning activities can be found in the *Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities* (NUREG-0586, NRC 2002). This comment is outside the scope of the GEIS, which analyzes the impacts of continued storage of spent nuclear fuel.

Comment: (0096-4)

### **B. Waste**

The NRC received a comment concerning disposal of GTCC low-level waste in a high-level waste repository. The environmental impacts associated with disposal of GTCC low-level waste are currently being assessed by the DOE, for example in its "Draft Environmental Impact

Statement for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste (LLRW) and GTCC-Like Waste” (DOE 2011). Assessing the environmental impacts associated with disposal of GTCC low-level waste is outside the scope of analysis for the Waste Confidence GEIS and will not be considered.

Comment: (0118-17-10)

The NRC received comments about spent nuclear fuel from foreign countries being shipped to the United States for treatment and disposal. The United States, through the DOE, has taken back research reactor fuel generated in various foreign countries through the Foreign Research Reactor Spent Nuclear Fuel Acceptance Program. The goal of this program is to eliminate inventories of highly enriched uranium by returning research reactor spent nuclear fuel to the country where the fuel was originally enriched. The continued storage of spent nuclear fuel generated at research reactors, either in the United States or abroad, is outside the scope of the GEIS and will not be considered further.

Comments: (0118-15-1) (0148-33) (0148-36) (0285-6)

The NRC received a comment requesting that additional environmental reviews be conducted to address the entire range of nuclear wastes generated throughout the nuclear fuel cycle and generated by sources other than nuclear power reactors, including wastes from enrichment facilities and weapons production. The focus of the Waste Confidence GEIS will be a generic assessment of the environmental impacts associated with the continued storage of spent nuclear fuel generated by nuclear power reactors. Assessing the environmental and health impacts associated with nuclear waste generated by uranium fuel cycle facilities, reactor operation, research reactors, or weapons production is outside the scope of the analysis and will not be considered.

Comment: (0262-9)

The NRC received comments about the West Valley site. The waste streams at the West Valley site, which are reprocessed wastes that have been vitrified and will be managed and disposed of by the DOE under the West Valley Demonstration Project Act, will not be considered in the Waste Confidence GEIS. Thus, wastes at the West Valley site are outside the scope of the Waste Confidence GEIS.

Comments: (0119-4-1) (0219-2) (0296-22)

### **C. Site-Specific**

The NRC received several comments about site-specific issues at individual plants. These comments refer to site-specific licensing and license renewal issues, as well as a range of safety and environmental concerns, including natural hazards, at individual sites. The GEIS will be limited to a generic analysis of the environmental impacts of continued storage. Comments about site-specific concerns are outside the scope of the Waste Confidence GEIS.

Comments: (0004-18-4) (0004-5-2) (0005-18-1) (0007-1) (0008-1) (0009-1) (0088-1) (0104-2) (0118-19-1) (0118-2-6) (0130-1) (0148-14) (0222-1) (0225-1) (0274-1) (0291-7) (0296-17) (0296-18) (0330-1)

The NRC received comments concerning operating license renewal at particular nuclear power plants. These comments express opposition to renewing operating licenses for existing nuclear power plants and are outside the scope of this analysis, which concerns the environmental impacts from continued storage of spent nuclear fuel.

Comments: (0062-3) (0068-3) (0072-4) (0221-1) (0277-9)

The NRC received comments about contamination at the Hanford Site in Washington State. The Hanford Site is not within scope of the Waste Confidence GEIS, because it is a DOE facility that is not regulated by the NRC.

Comments: (0159-1) (0252-1)

The NRC received a comment recommending that Idaho National Laboratory should not be considered as a site for consolidated storage. Site identification for away-from-reactor storage is not within the scope of the Waste Confidence GEIS, which will not select sites or grant licenses for future away-from-reactor storage.

Comment: (0214-1)

The NRC received comments concerning the operation and license renewal of Indian Point Nuclear Power Plant Units 2 and 3, as well as the relationship between this Waste Confidence analysis and that license renewal. The licensing or relicensing of any specific power plant or reactor technology is outside the scope of the Waste Confidence GEIS, which concerns the environmental impacts of continued storage of spent nuclear fuel. The Commission has stated that it will not issue licenses dependent upon Waste Confidence until the court's remand has been addressed, and this is true for the ongoing Indian Point license renewal proceeding.

Comments: (0001-5) (0026-2) (0030-3) (0031-1) (0034-1) (0036-1) (0088-2) (0108-2) (0229-1)

The NRC received comments concerning ongoing issues at the San Onofre Nuclear Generating Station. The current operating status of any specific power plant is outside the scope of the Waste Confidence GEIS, which concerns the environmental impacts of continued storage of spent nuclear fuel; therefore, these comments will not be evaluated further.

Comments: (0005-6-1) (0005-6-2) (0203-1)

The NRC received a comment about the operation and relicensing of the Diablo Canyon Nuclear Power Plant Units 1 and 2. The current operating status of any specific power plant will not be considered in the Waste Confidence GEIS, which is a generic analysis of the environmental impacts of the continued storage of spent nuclear fuel; therefore, these comments will not be evaluated further.

Comment: (0284-1)

The NRC received a comment about the potential licensing of a third reactor at the North Anna Power Station. Site-specific safety and environmental evaluations are conducted in individual combined license application reviews. The licensing of any specific nuclear power plant is

outside the scope of the Waste Confidence GEIS, which is a generic analysis of the environmental impacts of the continued storage of spent nuclear fuel; therefore, this comment will not be evaluated further.

Comment: (0005-3-3)

#### **D. NRC Oversight**

The NRC received comments expressing concern over the integrity, transparency, or credibility of the NRC as a regulator of the nuclear industry. Some comments question the NRC's enforcement of existing regulations, including implementation of security and monitoring requirements to prevent radiological accidents. The NRC is an independent agency and was established in 1975 to ensure the safe use of radioactive materials for beneficial civilian purposes while protecting people and the environment.

The NRC strives to conduct its regulatory responsibilities in an open and transparent manner, consistent with the NRC Approach to Open Government. Because these comments do not provide information related to the environmental review of continued storage of spent nuclear fuel, they will not be evaluated further.

Comments: (0001-1) (0057-1) (0114-1) (0118-20-2) (0149-1) (0220-2) (0231-3) (0243-2) (0262-10) (0277-10) (0290-7) (0290-8) (0314-2) (0316-2) (0336-6)

#### **E. Energy Alternatives**

The NRC received comments about alternative energy sources. These comments express general support of energy alternatives, including renewable energy sources. The alternatives analysis is an important aspect of NEPA, and energy alternatives are addressed in site-specific license renewal and combined license environmental reviews. Site-specific energy alternative concerns are outside of the scope for the Waste Confidence GEIS and will not be evaluated.

Comments: (0002-1) (0003-3) (0003-5) (0021-3) (0039-1) (0049-9) (0057-2) (0070-3) (0079-1) (0110-1) (0119-11-4) (0119-13-2) (0124-3) (0134-2) (0135-1) (0155-1) (0181-1) (0194-4) (0213-1) (0213-5) (0213-6) (0227-2) (0255-1) (0258-4) (0262-1) (0269-16) (0269-2) (0274-3) (0274-4) (0297-2) (0303-2)

#### **F. Emergency Planning**

The NRC received comments addressing emergency preparedness concerns, including site-specific evacuation planning. The purpose of the Waste Confidence GEIS is to analyze the generic environmental impacts of continued storage. Comments pertaining to emergency preparedness are outside of the scope for the Waste Confidence GEIS and will not be evaluated. In relation to emergency planning, commenters also expressed concerns about accidents involving spent fuel storage; as noted previously in this report, the environmental impacts from accidents will be evaluated in the GEIS.

Comments: (0004-23-7) (0056-1) (0056-3) (0106-1) (0119-11-1) (0119-14-1) (0231-2) (0246-5) (0269-4) (0291-1) (0291-15) (0291-26)



## **G. Miscellaneous**

### **1. Experimental Fuel Cladding Materials**

Two comments suggested that experimental cladding materials, such as silicon carbide and ceramic, be included in the scope of the GEIS. Experimental cladding materials are considered speculative and will not be addressed in the GEIS. The analysis of continued storage of spent nuclear fuel will include cladding materials that are presently in use in U.S. commercial reactors.

Comments: (0286-101) (0286-69)

### **2. Spent Fuel Storage Alternatives**

The NRC received comments that suggested novel or unexplored ways to address the spent nuclear fuel problem. The GEIS will not consider these undeveloped methods, because its scope is limited to the current state of technology. As new technologies are developed, the NRC will consider whether updates to this analysis are necessary to consider these developments.

Comments: (0054-1) (0054-2) (0122-1) (0163-1) (0163-3) (0163-6) (0163-7) (0179-1) (0188-1) (0295-5) (0309-1)

### **3. Mark I and II Reactor Designs**

The NRC received comments about boiling water reactor designs, including the General Electric Mark I and Mark II designs. The GEIS will not analyze the environmental impacts associated with licensing or relicensing nuclear reactors. The GEIS will evaluate the environmental impacts of the continued storage of spent nuclear fuel, including analyses of accidents. The purpose of the GEIS is to disclose the environmental impacts of continued storage of spent nuclear fuel.

Comments: (0118-7-1) (0118-7-2) (0242-1) (0250-1) (0281-6)

### **4. Fukushima Orders**

The NRC received comments concerning the *Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation* (EA-12-051) (NRC 2012d). These comments are outside the scope of this analysis, which is an update to the Waste Confidence rule. NRC actions following the accident in Japan can be found at <http://www.nrc.gov/reactors/operating/ops-experience/japan/japan-meeting-briefing.html>. The GEIS will contain appropriate discussion of spent fuel storage in spent fuel pools for continued storage, including impacts from accidents.

Comments: (0148-10) (0148-11) (0148-16)

### **5. Moving Spent Nuclear Fuel Away From Reactors**

The NRC received a comment recommending that the NRC require moving spent fuel away from operating reactors to prevent possible impacts on operating reactors. The environmental and health impacts of design basis accidents, including those that involve spent fuel handling, are evaluated during the initial licensing process, and the ability of the plant to withstand these

accidents is demonstrated to be acceptable before issuance of an operating license. The NRC continues to evaluate new information as it becomes available through the ongoing reactor oversight process. Should new information become available indicating a safety concern for an operating reactor, such as for spent nuclear fuel stored nearby, the NRC would evaluate that issue through a separate regulatory process such as the Generic Issues Program, and take whatever action is necessary to protect public health and safety. As a result, the potential impacts of spent nuclear fuel on an operating reactor are outside the scope of this GEIS and will not be evaluated further.

Comment: (0129-3)

## **6. Collaboration with Other Agencies and Experts Regarding Security**

The NRC received comments recommending that the NRC engage other government agencies or independent experts to aid the NRC in its site security and security assessments. The NRC works collaboratively with other government agencies to fulfill its statutory mission to protect the public health and safety and provide for common defense and security. However, the NRC does not defer any of its statutory obligations to other agencies. The Atomic Energy Act of 1954 grants the NRC authority to implement a domestic safeguards program. Recommendations that the NRC work collaboratively with other agencies to develop and implement site security and security assessments are outside the scope of the GEIS.

Comments: (0003-4) (0273-11) (0285-4)

## **7. Reasonable Assurance**

The NRC received comments requesting that the terms “reasonable assurance” and “adequate protection” be formally defined. These comments are outside the scope of the Waste Confidence analysis, which concerns a generic evaluation of the environmental impacts of the continued storage of spent nuclear fuel, not NRC safety standards. The term “adequate protection” is not defined in the Atomic Energy Act of 1954, as amended; it is a subjective, yet mandatory standard applicable to NRC licensing criteria, rather than to environmental analyses. The environmental analysis relies on the established licensing criteria in developing an impact analysis, but the GEIS will not explicitly define the terms “adequate protection” and “reasonable assurance.”

Comments: (0004-25-2) (0296-23)

## **8. Congressional Interactions**

The NRC received a comment regarding the relationship between the NRC and Congress. The NRC is an independent federal regulatory agency created by Congress and is statutorily obligated to keep Congress fully and currently informed about the agency’s activities through the Office of Congressional Affairs. The NRC has kept Congress informed of the Waste Confidence activities (e.g., Commission Order, formation of Directorate, publication of documents, public meetings) and will continue to keep Congress updated as the GEIS is developed.

Comment: (0277-3)

## **9. Legislative Changes**

The NRC received comments about legislative changes in favor of particular spent fuel storage strategies. Legislative changes are beyond the scope of the Waste Confidence GEIS, which concerns the environmental impacts of the continued storage of spent fuel; these changes will not be considered.

Comments: (0118-26-2) (0148-34) (0323-14)

## **10. Regulatory Framework for Spent Fuel Management**

The NRC received a comment about the regulatory status of commercial spent nuclear fuel that requested an evaluation of the current regulatory framework. While the overarching regulatory framework for managing spent nuclear fuel may be described in the GEIS, an evaluation of the existing framework is outside the scope of the Waste Confidence GEIS.

Comment: (0246-10)

## **11. Blue Ribbon Commission Organizational Recommendations**

The NRC received comments recommending a new or different organization to address nuclear waste following the report of the Blue Ribbon Commission on America's Nuclear Future (BRC 2012). Two commenters point out that the Blue Ribbon Commission recommended the creation of a new organization to implement a nuclear waste management program. At this time, the NRC is the only federal agency appointed to regulate the long-term storage of spent nuclear fuel and high-level waste. Because these comments are not within the scope of the Waste Confidence GEIS, they will not be considered further.

Comments: (0233-3) (0282-5) (0294-1)

## **12. Repository Policy**

The NRC received comments concerning implementation of the Nuclear Waste Policy Act and impediments to the development of a permanent repository for spent nuclear fuel. Because policy related to development of a national repository is outside the scope of the Waste Confidence GEIS, the comments will not be considered further.

Comments: (0038-7) (0055-2) (0174-1) (0174-2) (0213-3) (0226-2) (0244-21) (0244-22) (0262-2) (0268-1) (0268-5) (0268-6) (0268-7) (0278-1) (0280-8) (0282-2) (0282-3) (0282-4) (0282-7) (0292-2) (0292-3) (0320-1) (0321-1)

## **13. Evaluating Repository Impacts**

The NRC received comments about final disposal of spent nuclear fuel. Several comments stated that the GEIS needs to consider environmental impacts or safety of a repository, including the effects of spent nuclear fuel degradation due to extended storage. The effects of spent fuel degradation will be considered as part of the Waste Confidence GEIS. However,

assessing the impacts associated with geological disposal of spent fuel in a repository is outside the scope of the Waste Confidence GEIS and will not be considered.

Comments: (0225-2) (0265-8) (0265-9) (0280-3) (0286-74) (0296-5) (0300-2)

#### **14. Repository Development**

The NRC received comments expressing support or interest in development of a repository as a permanent storage or disposal solution. The purpose of the Waste Confidence GEIS is to evaluate the potential impacts of continued storage. The GEIS will not assess the impacts associated with the licensing, construction, or operations of a repository. The environmental impacts of a repository will be analyzed as part of the site-specific licensing proceeding for a repository. Because development of a repository will be considered in a separate proceeding, this analysis is outside the scope of the Waste Confidence GEIS and will not be considered further.

Comments: (0004-8-3) (0125-3) (0148-5) (0158-4) (0190-1) (0209-1) (0276-4) (0323-13)

#### **15. Environmental Justice in Repository Siting**

The NRC received a comment about environmental justice issues at Yucca Mountain. Because this comment does not pertain to the environmental impacts of continued storage of spent nuclear fuel, the comment will not be considered further.

Comment: (0118-17-4)

#### **16. Reactor License Renewal Procedures**

The NRC received one comment on updates to the NRC's procedures for reactor license renewals. License renewal activities are outside the scope of the GEIS and are assessed by the NRC in separate, site-specific safety and environmental reviews. A site-specific environmental review (resulting in a supplemental EIS) is conducted for license renewal applications. Information on the NRC's license renewal process can be found at the NRC's website: <http://www.nrc.gov/reactors/operating/licensing/renewal.html>.

Comment: (0272-3)

#### **17. Licensing Delays**

The NRC received a comment expressing concern about delays in licensing nuclear reactors while the NRC responds to the court remand. This comment does not address issues within the scope of the Waste Confidence GEIS, and so it will not be considered further.

Comment: (0005-2-3)

#### **18. Ongoing Proceedings**

The NRC received a comment concerning ongoing licensing proceedings and this rulemaking. This comment is outside the scope of the Waste Confidence analysis, which concerns the

impacts from the continued storage of spent fuel, not NRC adjudications or adjudicatory policy. In Commission Order CLI-12-16 (NRC 2012a) the Commission stated that “in recognition of our duties under the law, we will not issue licenses dependent upon the Waste Confidence Decision or the Temporary Storage Rule until the court’s remand is appropriately addressed. This determination extends just to final license issuance; all licensing reviews and proceedings should continue to move forward.” Continuing in a footnote, the Commission stated “that it is in the public interest for adjudications to proceed, except for contentions associated with waste confidence issues.”

Comment: (0223-2)

### **19. The 10 CFR § 2.206 Process**

The NRC received a comment about the 10 CFR § 2.206 petition process. This regulation permits any person to file a request to institute a proceeding to, among other things, modify, suspend, or revoke an NRC license. Waste Confidence is not a licensing proceeding. Because this comment is outside the scope of this analysis, which generically concerns an analysis of the environmental impacts of continued spent fuel storage, it will not be considered further.

Comment: (0118-11-1)

### **20. Request to Amend Adjudicatory Procedure Regulations**

The NRC received a comment requesting that the Commission establish a new procedure by which the public would have an opportunity to raise site-specific impacts of continued storage before the ASLB. The GEIS will generically analyze the environmental impacts of continued storage. The GEIS and Waste Confidence rule will identify those impacts that cannot be analyzed generically and therefore must be analyzed on a site-specific basis. NRC adjudications are governed by current NRC regulations, principally in 10 CFR Part 2. Therefore, this request to amend or create new adjudicatory proceeding regulations is outside the scope of the GEIS.

Comment: (0275-17)

### **21. Federal Funding of Monitoring**

The NRC received one comment requesting that funds be dedicated to local and state governments to independently monitor spent fuel storage sites. This issue is outside the scope of the environmental impacts of continued storage; therefore, the GEIS will not address funding for independent monitoring.

Comment: (0004-14-9)

### **22. Costs Associated with Nuclear Power Production**

The NRC received comments requesting that the GEIS address general costs associated with nuclear power production, including subsidies. One comment also raised concerns about the costs of nuclear weapon technology production. These issues are outside the scope of the

environmental impacts of continued storage; therefore, the GEIS will not address the costs associated with nuclear power or nuclear weapon production.

Comments: (0079-2) (0269-19) (0269-6)

### **23. Methane Hydrates**

The NRC received one comment that refers to a release of methane from methane hydrates in the oceans that could cause a worldwide explosion. The postulated fast release of methane hydrates is outside the scope of the GEIS and will not be considered further.

Comments: (0009-5)

### **24. Opposition to Nuclear Power**

The NRC received comments expressing general opposition to nuclear power, including calls to cease all nuclear reactor licensing and to decommission all operating reactors. These comments did not address the scope of GEIS, which will evaluate the environmental impacts of continued storage. These comments are outside the scope of the GEIS.

Comments: (0025-1) (0048-2) (0055-3) (0070-2) (0089-2) (0092-2) (0093-1) (0094-1) (0095-1) (0105-1) (0109-1) (0118-13-3) (0119-11-3) (0144-1) (0146-1) (0158-2) (0171-1) (0173-1) (0185-1) (0195-3) (0205-1) (0206-1) (0212-1) (0213-2) (0224-1) (0228-3) (0230-1) (0261-1) (0306-1)

### **25. Support for Nuclear Power**

The NRC received comments expressing support for nuclear power in the context of preventing global warming. The purpose of the Waste Confidence GEIS is to disclose the generic environmental impacts of continued spent fuel storage. These comments are outside the scope of this GEIS.

Comments: (0005-2-1) (0005-2-2) (0005-4-1)

## C. References

10 CFR Part 2. Code of Federal Regulations, Title 10, *Energy*, Part 2, “Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders.” Available at <http://www.nrc.gov/reading-rm/doc-collections/cfr/part002/>.

10 CFR Part 51. Code of Federal Regulations, Title 10, *Energy*, Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions.” Available at <http://www.nrc.gov/reading-rm/doc-collections/cfr/part051/>.

10 CFR Part 71. Code of Federal Regulations, Title 10, *Energy*, Part 71, “Packaging and Transportation of Radioactive Material.” Available at <http://www.nrc.gov/reading-rm/doc-collections/cfr/part071/>.

10 CFR Part 73. Code of Federal Regulations, Title 10, *Energy*, Part 73, “Physical Protection of Plants and Materials.” Available at <http://www.nrc.gov/reading-rm/doc-collections/cfr/part073/>.

51 FR 15618. April 25, 1986. “National Environmental Policy Act Regulations; Incomplete or Unavailable Information.” *Federal Register*. Council on Environmental Quality, Executive Office of the President.

65 FR 67249. November 9, 2000. “Executive Order 13175 of November 6, 2000, Consultation and Coordination with Indian Tribal Governments.” *Federal Register*. Office of the President.

74 FR 66589. December 16, 2009. “Draft Technical Basis for Rulemaking Revising Security Requirements for Facilities Storing SNF and HLW; Notice of Availability and Solicitation of Public Comments.” *Federal Register*. U.S. Nuclear Regulatory Commission.

75 FR 81037. December 23, 2010. “Waste Confidence Decision Update.” *Federal Register*. U.S. Nuclear Regulatory Commission.

77 FR 65137. October 25, 2012. “Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation.” *Federal Register*. U.S. Nuclear Regulatory Commission.

77 FR 74788. December 18, 2012. “Long-Term Cooling and Unattended Water Makeup of Spent Fuel Pools.” *Federal Register*. U.S. Nuclear Regulatory Commission.

Atomic Energy Act of 1954, as amended. 42 U.S.C. 2011 *et seq.*

Blue Ribbon Commission on America’s Nuclear Future (BRC). 2012. *Blue Ribbon Commission on America’s Nuclear Future Report to the Secretary of Energy*. U.S. Department of Energy, Washington, DC. Accession No. ML12073A433.

Council on Environmental Quality (CEQ). 2012. *Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act*. March 6, 2012. Washington, DC. Available at Available at 77 FR 14473 and [http://www.whitehouse.gov/sites/default/files/microsites/ceq/improving\\_nepa\\_efficiencies\\_06mar2012.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ceq/improving_nepa_efficiencies_06mar2012.pdf).

*Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979).

National Environmental Policy Act of 1969 (NEPA), as amended. 42 U.S.C. 4321 *et seq.*

National Historic Preservation Act (NHPA). 16 U.S.C. 470 *et seq.*

*New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012). Available at ADAMS Accession No. ML12191A407.

Nuclear Waste Policy Act of 1982 (NWPA). 42 U.S.C. 10101 *et seq.*

Shaw/AREVA MOX Services, LLC. 2010. *Mixed Oxide Fuel Fabrication Facility License Application*. Aiken, South Carolina. Accession No. ML101040742.

U.S. Department of Energy (DOE). 2002. *Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mount, Nye County, Nevada*. DOE/EIS-0250. Washington, DC. ADAMS Accession Nos. ML032690321 and ML081750191.

U.S. Department of Energy (DOE). 2011. *Draft Environmental Impact Statement for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-Like-Waste*. DOE/EIS-0375-D. Washington, DC. Available at <http://energy.gov/nepa/downloads/eis-0375-draft-environmental-impact-statement>.

U.S. Nuclear Regulatory Commission (NRC). 2002. *Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities*. NUREG-0586, Supplement 1, Vols. 1 and 2. Washington, DC. Available at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0586/>.

U.S. Nuclear Regulatory Commission (NRC). 2003. *Environmental Review Guidance for Licensing Actions Associated with NMSS Programs: Final Report*. NUREG-1748. Washington, DC. Available at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1748/>.

U.S. Nuclear Regulatory Commission (NRC). 2009a. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Draft Report for Comment*. NUREG-1437, Vols. 1 and 2. Washington, DC. Available at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/r1/index.html>.

U.S. Nuclear Regulatory Commission (NRC). 2009b. *Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities*. NUREG-1910, Vols. 1 and 2. Washington, DC. Available at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1910/>.

U.S. Nuclear Regulatory Commission (NRC). 2011a. *Draft Report for Comment, Background and Preliminary Assumptions for an Environmental Impact Statement—Long-Term Waste Confidence Update*. Accession No. ML11340A141.

U.S. Nuclear Regulatory Commission (NRC). 2011b. "Policy Issue Information—SECY-11-0029—Plan for the Long-Term Update to the Waste Confidence Rule and Integration with the Extended Storage and Transportation Initiative." SECY-11-0029, Washington, DC. Accession No. ML110330445.



U.S. Nuclear Regulatory Commission (NRC). 2012a. "Commission Memorandum and Order (CLI-12-16)." CLI-12-16, Washington, DC. Accession No. ML12220A100.

U.S. Nuclear Regulatory Commission (NRC). 2012b. "Enclosure to SECY-12-0132—Licensing Actions Affected by Waste Confidence Remand." SECY-12-0132, Washington, DC. Accession No. ML12276A038.

U.S. Nuclear Regulatory Commission (NRC). 2012c. "Staff Requirements—COMSECY-12-0016—Approach for Addressing Policy Issues Resulting from Court Decision to Vacate Waste Confidence Decision and Rule." SRM-COMSECY-12-0016, Washington, DC. Accession No. ML12250A032.

U.S. Nuclear Regulatory Commission (NRC). 2012d. "Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation." EA-12-051, Washington, DC. Accession No. ML12054A679.

West Valley Demonstration Project Act (WVDPA). 42 U.S.C. 2021a.

## D. List of Commenters on the Scope of the Waste Confidence GEIS

Diane Curran (Harmon, Curran, Spielberg & Eisenberg, LLP) submitted two comment documents (ADAMS Accession Nos. ML13007A441 and ML13017A404) on behalf of the following organizations and individuals: Mindy Goldstein (Turner Environmental Law Clinic), Arjun Makhijani (Institute for Energy and Environmental Research), Gordon R. Thompson (Institute for Resource and Security Studies), Phillip Musegaas (Riverkeeper), Alliance for Nuclear Accountability, Beyond Nuclear, Blue Ridge Environmental Defense League, Center for a Sustainable Coast, Citizens Allied for Safe Energy, Citizens Environmental Alliance, Don't Waste Michigan, Ecology Party of Florida, Friends of the Earth, Georgia Women's Action for New Directions, Hudson River Sloop Clearwater, Missouri Coalition for the Environment, NC WARN, Nevada Nuclear Waste Task Force, New England Coalition, Nuclear Information and Resource Service, Nuclear Watch South, Physicians for Social Responsibility, Public Citizen, Riverkeeper, San Luis Obispo Mothers for Peace, SEED Coalition, Sierra Club Nuclear Free Campaign, and Southern Alliance for Clean Energy. For administrative reasons, Ms. Curran is listed as the sole author of the comments in these two documents, but the NRC here notes the additional signatories to these comment documents.

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Anonymous		ML12324A375	0001
Anonymous		ML13018A405	0146
Anonymous		ML13022A222	0115
Anonymous		ML13022A223	0266
Anonymous		ML12324A375	0007
Anonymous		ML12324A319	0113
Abbott, Dana		ML13022A222	0115
Adams, Grace		ML12324A381	0003
Adams, Grace		ML13028A031	0254
Agnew, David	Cape Downwinders	ML12355A187	0119-6
Agnew, David	Cape Downwinders	ML13028A019	0242
Aguilera, Marco		ML13022A222	0115
Albertini, John		ML12331A278	0319
Alcon, Sylvia		ML13022A558	0178
Alexander, Charles		ML13018A409	0150
Alexander, Kathleen		ML13022A222	0115
Alger, Dwight		ML12331A278	0319
Allen, Melissa		ML13022A222	0115
Amel, Dean		ML13022A222	0115
Anderson, Johanna		ML12324A321	0029
Anderson, Johanna		ML13028A035	0257
Anderson, Johanna		ML13030A357	0287

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Anderson, Peter		ML12331A278	0319
Anderson, Stevie		ML13022A222	0115
Andreas, Sonja	MN Peace Group	ML12331A278	0319
Andreas, Sonja	MN Peace Group	ML12324A281	0014
Andrews, Richard		ML13030A028	0262
Angelus, Joshua		ML12331A278	0319
Angst, Sara		ML13058A029	0115
Armstrong, Robert F.		ML13022A502	0201
Arnon, Daniela		ML13022A557	0177
Atkinson, Kim		ML12331A278	0319
Attaguile, Faith		ML13018A427	0166
Azarovitz, Janet		ML12342A277	0089
Baekstrom, Chris		ML13022A222	0115
Bahr, Richard	Sierra College	ML13023A395	0180
Baier, Mary Ann		ML13022A222	0115
Baier, Mary Ann		ML13028A007	0326
Bailey, Lee		ML12331A278	0319
Bailin, Jonathan		ML12331A278	0319
Barczak, Sara	Southern Alliance for Clean Energy	ML12331A347	0004-12
Baron, James		ML12331A278	0319
Barrett, Lake	Sustainable Fuel Cycle Task Force Science Panel	ML13030A023	0280
Bartholomew, Alice		ML12324A348	0099
Bartholomew, Alice		ML12334A394	0071
Bartolacelli, Richard		ML13022A222	0115
Bateman, Guy		ML13022A222	0115
Beavis, Margaret		ML12331A278	0319
Behling, Steve		ML12325A058	0054
Bell, Michael		ML13028A004	0226
Benes, Michelle		ML13022A222	0115
Benmosche, Shoshanna		ML12331A278	0319
Bennett, Paul		ML13022A222	0115
Berger, Dian		ML12324A350	0100
Bergh, Darcy		ML12331A278	0319
Berman, Gary		ML13022A222	0115
Bernard, Janice		ML12331A278	0319
Bernard, John		ML12324A352	0120
Bernstein, Laura		ML12331A278	0319
Bertha, Bertha		ML13022A222	0115

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Beverly, Jessica E.		ML12331A278	0319
Bevill, Bernard	Arkansas Department of Health	ML13007A400	0294
Biddle, Lynn		ML12331A278	0319
Biddle, Lynn		ML12325A051	0050
Birnie, Pat	Women's International League for Peace and Freedom	ML12334A381	0059
Birnie, Patricia		ML13015A308	0253
Birnie, Patricia T.	GE Stakeholders' Alliance	ML13011A083	0323
Bishop, Damon		ML13022A222	0115
Blakely, Naiomi		ML13022A498	0115
Blee, David S.	United States Nuclear Infrastructure Council	ML13007A357	0276
Blevins, Katherine		ML13022A222	0115
Block, Gary		ML13022A222	0115
Blue, Donna		ML12331A278	0319
Blumenthal, Bob		ML12331A278	0319
Bosold, Patrick	Iowa Sierra Club	ML12334A398	0077
Bosold, Patrick	MN Peace Group	ML12324A346	0098
Bosold, Patrick		ML12325A012	0043
Bottomley, Pat		ML13022A222	0115
Bradbeer, Wilma		ML12324A359	0035
Brailsford, Beatrice	Snake River Alliance	ML13007A356	0288
Brancato, Deborah	Riverkeeper	ML12340A150	0086
Branham, Rebecca		ML13018A322	0131
Bratcher, Deborah		ML13022A222	0115
Brimm, Martha		ML13022A222	0115
Brock, Matthew	Massachusetts Office of Attorney General	ML13011A084	0275
Bromm, Susan E.	U.S. Environmental Protection Agency	ML13028A469	0325
Brooks, Michele		ML13022A563	0183
Brown, Beth		ML13022A222	0115
Brown, Deb		ML13022A496	0198
Brown, Roger		ML12331A278	0319
Bruce, Buffalo		ML13022A222	0115
Buckner, Marian		ML13018A204	0126
Buenzle, Tom		ML13022A222	0115
Burke, Barbara		ML13022A222	0115
Burns, Alan		ML13022A222	0115
Burpo, Leslie		ML13022A222	0115
Burton, Bruce		ML12331A347	0004-8

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Burton, Vic		ML13022A505	0326
Butler, Edward		ML12324A297	0001
Butler, Elizabeth		ML12331A278	0319
Byrne, James		ML12331A278	0319
C, John		ML13022A511	0187
Calendine, Georgeann		ML13018A415	0154
Callahan, Mike	Decommissioning Plant Coalition	ML12331A347	0004-9
Callahan, Mike	Decommissioning Plant Coalition	ML13010A126	0259
Calter, Thomas J.	Massachusetts State Representative	ML13007A406	0299
Camhi, Gai		ML13023A390	0212
Cappelletti, Regina		ML13022A222	0115
Carberry, Mike		ML12331A278	0319
Carberry, Mike		ML13022A222	0115
Carey, Deborah		ML12331A278	0319
Carrigan, Milton		ML13022A222	0115
Cash, Joy	Women Occupy	ML13022A506	0203
Caswell, Richard		ML13022A222	0115
Cavalier, Corey		ML13022A222	0115
Chapman, Robin		ML13022A555	0175
Cherwink, Rob		ML13022A222	0115
Chess, Deborah		ML12324A318	0112
Chischilly, Jane		ML12324A373	0042
Christman, Dave		ML12331A278	0319
Clark, Carolyn		ML13022A222	0115
Clark, Kenneth		ML12334A387	0064
Clausing, Mary		ML13022A222	0115
Clements, Tom	Alliance for Nuclear Accountability	ML13007A354	0301
Clucas, Donald		ML13022A222	0115
Cobb, Sandra		ML13022A491	0216
Cobb, Sandra M.		ML12331A278	0319
Cochran, Moncrieff		ML12340A152	0080
Cockerill, Marc		ML13022A222	0115
Cohen, Judy		ML13022A222	0115
Coleman, Chrystal		ML13018A422	0161
Collecchia, Geri		ML12324A277	0010
Collecchia, Geri		ML12334A388	0065
Collins, Carol		ML13022A222	0115
Collins, Fred	Northern Chumash Tribal Council	ML13010A118	0284
Combes, Steven B.		ML12331A278	0319

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Cooper, Susan		ML13028A016	0240
Copi, Margaret		ML12331A278	0319
Courtright, Caroline		ML12331A278	0319
Craig, Anne		ML12356A231	0290
Craig, Anne		ML12324A391	0103
Craig, Anne		ML13022A222	0115
Craig, Carol		ML13022A222	0115
Cramer, Pamela		ML13018A403	0144
Crockett, Margaret		ML13022A554	0174
Crowley, Loretta		ML13022A561	0181
Cunningham, Jim		ML12331A278	0319
Cunningham, Kristine	NC Sierra Club	ML12324A392	0104
Cunningham, Kristine	Sierra Club North Carolina-Ashville	ML13028A010	0234
Curlette, Diane		ML13022A222	0115
Curran, Diane	Harmon, Curran, Spielberg & Eisenberg, LLP	ML13007A441	0286
Curran, Diane	Harmon, Curran, Spielberg & Eisenberg, LLP	ML13017A404	0322
Curran, Diane	Harmon, Curran, Spielberg & Eisenberg, LLP	ML12340A149	0085
Curtis, Marni		ML12331A278	0319
D'Arrigo, Diane	Nuclear Information Resource Service	ML12355A187	0119-4
D'Arrigo, Diane	Nuclear Information Resource Service	ML12355A187	0119-8
D'Arrigo, Diane	Nuclear Information Resource Service	ML13030A358	0285
Davies, Phyllis		ML13022A222	0115
Davis, Diane G.		ML12331A278	0319
Davis, Randall		ML13022A222	0115
De Cecco, Jorge		ML13022A222	0115
De Falla, Susanna	Sierra Club	ML13022A494	0196
Decker, Michael	Sierra Club	ML13018A324	0133
DeMarsh, Julianne		ML13022A222	0115
Demorest, Carolyn		ML12331A278	0319
Denneen, Bill		ML13022A516	0192
Derbigny, Rodney		ML12334A397	0074
DeStefano, Linda		ML12331A278	0319
Deutsch, James		ML13023A398	0220
Dickinson, Lee	National Park Service	ML13028A011	0235
Didrichsen, Susan		ML12324A367	0039
Diederichs, Barbara		ML12324A376	0032
Dilling, Brock		ML12331A278	0319

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
DiMatteo, Richard		ML12331A278	0319
Dimitri, Mr. and Mrs. William		ML13022A222	0115
Doucet, Lisha		ML13022A222	0115
Drey, Kay	Beyond Nuclear	ML13007A407	0300
Dubois, Gwen L.	Chesapeake Physicians for Social Responsibility	ML12332A227	0058
Dunivant, Terre		ML13022A553	0173
Earle, Ben		ML12331A278	0319
Eichelberger, Don		ML13022A222	0115
Eilenberg, Alisa		ML12334A384	0061
Eisenstark, Sarita		ML12324A324	0027
Elliot, Ed		ML13022A222	0115
Enebo, Karin		ML12328A011	0055
Espinosa, Sally		ML13022A222	0115
Estes, Douglas		ML13022A222	0115
Esteve, Gregory		ML12331A278	0319
Evans, Dinda		ML12319A468	0008
Evans, Dinda		ML13022A222	0115
Evans, Michael W.		ML12324A366	0001
Evans, Patricia	Riverkeeper/Clearwater	ML12324A317	0111
Fairhurst, Charles	Sustainable Fuel Cycle Task Force	ML13030A023	0280
Falk, Melba		ML13022A222	0115
Falkner, Carla		ML13022A495	0197
Faris, Janice and Larry		ML12331A278	0319
Farrington, Susan	Sierra Club, Riverkeeper	ML12324A357	0033
Fast, Wendy		ML12324A380	0023
Fast, Wendy		ML13028A020	0243
Fazzari, Angie		ML12331A278	0319
Feldman, Jane		ML13022A222	0115
Ferrara, Amy		ML12324A310	0109
Fettus, Geoffrey	Natural Resources Defense Council, Inc.	ML13017A404	0322
Fettus, Geoffrey	Natural Resources Defense Council, Inc.	ML12340A149	0085
Fettus, Geoffrey	Natural Resources Defense Council, Inc.	ML13010A145	0271
Filler, Matthew		ML13023A404	0225
Fisher, Allison		ML13022A223	0266
Fiske, Nancy		ML12331A278	0319

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Flanagan, Lynn		ML12324A322	0030
Fleetham, Chelsea		ML12324A363	0037
Flowers, Bobbie		ML12324A302	0001
Flowers, Bobbie		ML13022A222	0115
Foley, Brian		ML13022A222	0115
Forbes, Jane		ML13022A222	0115
Forbes, June		ML12331A278	0319
Forbes, Melinda	Mothers for Peace	ML13022A566	0186
Forlie, Kai Mikkell		ML12325A017	0048
Foskett, MaryAnna		ML13022A222	0115
Foster, Tracy	Beyond Nuclear	ML13028A032	0255
Fouche, David		ML13022A222	0115
Fowler, Joanna	Brackenhollow Stables	ML13018A401	0142
Frankfurter, Aryeh		ML13022A222	0115
Frantin, Lillia	Pilgrim Anti Nuclear Action/Cape Cod	ML123380143	0094
Frederick, Vicki		ML12331A278	0319
Fredrickson, Amy		ML12324A394	0107
French, Dominique	Nuclear Information Resource Service	ML12331A347	0004-13
Fronce, Linnea M.		ML13022A222	0115
Fuchs, Katherine	Alliance for Nuclear Accountability	ML12331A347	0004-18
Fuchs, Katherine	Alliance for Nuclear Accountability	ML13030A020	0281
Gale, Maradel		ML12331A278	0319
Gale, Maradel		ML13022A223	0266
Garner, Lowell		ML12324A306	0026
Gasperoni, John		ML12331A278	0319
Geary, B.	Citizen Action for Safe Energy	ML13028A022	0247
Geise, Mark M.		ML13022A510	0326
Gellert, Sally Jane	MN Peace Group	ML12324A342	0019
George, Edward		ML12331A278	0319
Gibble, Joia		ML13022A222	0115
Gilbert, Valerie		ML12324A395	0001
Gilva, Stephen		ML13022A222	0115
Ginsberg, Ellen	Nuclear Energy Institute	ML12331A347	0004-7
Ginsberg, Ellen	Nuclear Energy Institute	ML13010A124	0263
Giral, Joe		ML13022A551	0172
Glass, Peter M.	Xcel Energy	ML13010A132	0292
Goldfarb, Carole		ML13018A397	0138
Goldin, Martha		ML13022A222	0115
Goldman, Steve		ML12331A278	0319



<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Goldstein, Mindy	Turner Environmental Law Clinic	ML12340A149	0085
Golich, Conrad		ML12331A278	0309
Goodell, Barbara		ML13023A397	0115
Gosnell, Lisa		ML13022A222	0115
Gould, Schuyler		ML12331A278	0308
Goze, Yunjoo		ML12324A365	0038
Graham, Roger		ML13028A025	0255
Grajeda, Monique		ML13022A565	0185
Graves, Caryn		ML12331A278	0319
Graves, N.		ML13022A222	0115
Gray, Erica		ML12331A353	0005-3
Greensfelder, Jeanie		ML13022A550	0171
Grenard, Mike Hayduke	MN Peace Group	ML12324A343	0020
Groot, Henriette	Mothers for Peace	ML13022A507	0204
Gugino, Martin		ML13023A396	0219
Gupton, William		ML13022A222	0115
Haasch, Jane E.		ML12324A299	0078
Haasch, Jane E.		ML12325A060	0079
Hackner, Paul		ML12331A278	0319
Hadovsky, Linda		ML13022A222	0115
Halevy, Libbe		ML12331A353	0005-6
Halizak, Kimberly Anne		ML13022A222	0115
Hall, Dennis		ML12331A278	0319
Hall, Silvia		ML13022A222	0115
Halligan, Mary A.		ML12331A278	0319
Halstead, Robert	State of Nevada Agency for Nuclear Projects	ML13010A120	0265
Hamilton, Helen		ML12331A278	0319
Hamrick, Steve		ML12331A347	0004-19
Handelsman, Robert		ML13018A399	0140
Hanes, Fenna	Pilgrim Coalition	ML13028A026	0250
Hanley-Hyde, Joan		ML12331A278	0319
Hanna, Helen N.		ML12331A278	0319
Hannah, Rober		ML13022A222	0115
Hansen, Jan		ML13022A222	0115
Hanson, Art		ML12324A304	0025
Hanson, Art		ML13022A222	0115
Hanson, Natalie		ML12324A304	0025
Hanson, Natalie		ML13022A222	0115

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Hargrove, Chris		ML13022A222	0115
Harkins, Lynne		ML13022A222	0115
Harlan, Thomas	City of Red Wing, Minnesota	ML13010A131	0291
Harris, Deborah W.		ML13023A384	0207
Hartman, Randall		ML13018A419	0158
Haschke, Becky		ML13022A222	0115
Hasselbrink, Bob		ML12331A278	0319
Hasselgren, Joan		ML13018A319	0128
Hatfield, Barry		ML12331A278	0319
Hatley, Earl	LEAD Agency	ML13028A027	0251
Haughney, Charles		ML13030A019	0282
Hauck, Molly		ML13022A222	0115
Hazynski, Chris		ML13018A402	0143
Headrick, Gary	San Clemente Green	ML13018A398	0139
Helmstetter, Chris		ML12331A278	0319
Hendin, Judith		ML13022A222	0115
Henry, Beth		ML13028A009	0231
Hill, Edwin		ML13010A128	0267
Hill, Michael		ML13022A222	0115
Hodgkins, Yvonne		ML12331A278	0319
Hoffman, Ace	Nuke Free North County California	ML13007A358	0279
Hoffman, David		ML12325A015	0046
Hofford, William		ML12331A278	0319
Holmes, Andre		ML13058A061	0218
Holt, Robert		ML12331A278	0319
Holzberg, Steven		ML12331A278	0319
Homer, Deanna		ML13028A036	0258
Hoodwin, Marcia		ML12320A361	0313
Hoodwin, Marcia		ML12324A384	0105
Horn, Stewart		ML12331A347	0004-26
Horowitz, Shel		ML12324A320	0028
Horvat, Sabolch		ML13022A222	0115
Howard, Gloria J.		ML13022A223	0121
Howard, Gloria J.		ML13022A222	0115
Howard, Gordon	Sierra Club	ML12331A278	0304
Howard, Gordon	Sierra Club	ML13022A556	0176
Hudson, Marcella		ML12331A278	0319
Hughes, Kevin		ML13022A222	0115
Hurzeler, Philip		ML12331A278	0319

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Hutchings, William		ML13022A222	0115
Hynes, Patricia		ML12331A278	0319
Ingram, Gwen		ML12320A361	0317
Irwin, John		ML12331A278	0319
Israel, Marcy		ML13022A512	0188
Iversen, Gerald		ML13022A222	0115
Iwane, Cathy		ML12331A353	0005-14
Iwane, Cathy		ML12331A353	0005-18
Jamil, Dhiaa	Duke Energy Corporation	ML13010A127	0264
Janusko, Robert and Donna		ML12331A278	0319
Jaworski, Mary		ML12355A174	0118-18
Jeffrey, Monroe Edwin		ML12331A278	0319
Jeffrey, Monroe Edwin		ML12324A282	0016
Jenkins, David		ML13022A222	0115
Jennings, Sid		ML13018A416	0155
Jessler, Darynne		ML12334A385	0062
Johaningsmeir, Mark		ML12331A278	0319
Johnson, Abigail	Eureka County Nuclear Waste Program	ML13007A404	0298
Johnson, Alaina		ML12324A316	0110
Johnson, Alaina		ML13023A403	0224
Johnson, Ron	Prairie Island Indian Community	ML12331A347	0004-4
Jones, Robert		ML13022A222	0115
Jones, Virginia		ML13018A412	0153
Jorgensen, Andrea		ML13022A222	0115
Joseph, Randy		ML13022A222	0115
Jurek, James		ML13022A222	0115
Kammerer, Greg		ML12334A390	0067
Kamps, Kevin	Beyond Nuclear	ML12331A347	0004-11
Kamps, Kevin	Beyond Nuclear	ML12331A353	0005-5
Kamps, Kevin	Beyond Nuclear	ML12331A353	0005-7
Kamps, Kevin	Beyond Nuclear	ML12331A353	0005-9
Kamps, Kevin	Beyond Nuclear	ML12355A174	0118-17
Kamps, Kevin	Beyond Nuclear	ML12355A174	0118-2
Kamps, Kevin	Beyond Nuclear	ML12355A174	0118-25
Kamps, Kevin	Beyond Nuclear	ML12355A174	0118-8
Kamps, Kevin	Beyond Nuclear	ML12355A174	0118-9
Kamps, Kevin	Beyond Nuclear	ML13060A240	0332
Kamps, Kevin	Beyond Nuclear	ML13060A240	0333

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Kamps, Kevin	Beyond Nuclear	ML13060A240	0334
Kamps, Kevin	Beyond Nuclear	ML13060A240	0335
Kamps, Kevin	Beyond Nuclear	ML13023A405	0326
Kamps, Kevin	Beyond Nuclear	ML13030A021	0329
Kamps, Kevin	Beyond Nuclear	ML13030A022	0328
Kamps, Kevin	Beyond Nuclear	ML13030A025	0327
Kamps, Kevin	Beyond Nuclear	ML13032A565	0331
Kamps, Kevin	Beyond Nuclear	ML13037A298	0330
Karpen, Leah		ML12356A232	0293
Katz, David		ML13022A222	0115
Kelly, Karen A.		ML12331A278	0319
Kennedy, David		ML13028A018	0326
Kenyon, Deborah		ML13022A222	0115
Kerr, Beverly	Blue Ridge Environmental Defense League	ML12347A190	0090
Kerr, Julius		ML12355A174	0118-10
Kerr, Julius		ML12355A174	0118-20
Kerr, Julius		ML12355A187	0119-11
Kerr, Julius		ML12355A187	0119-13
Kerr, Julius		ML12355A187	0119-9
Kersting, John		ML12324A372	0041
Khalsa, Mha Atma S.		ML12331A278	0319
Kiralla, Michael		ML13022A222	0115
Kirk, John		ML12324A351	0101
Kitman-Trimmer, Lorraine		ML13022A222	0115
Klein, Roberta		ML12348A035	0095
Kline, Susan		ML13023A399	0221
Knipp, Donna		ML13022A499	0326
Knol, Patricia		ML13022A222	0115
Knox, Eric	United States Nuclear Infrastructure Council	ML13007A357	0276
Koessel, Karl		ML12331A278	0319
Kohl, Sybil		ML13022A222	0115
Kohler, Joseph		ML13028A021	0246
Koivisto, Ellen and Gene Thompson		ML12331A278	0319
Kotch, Brant		ML13022A222	0115
Kovitz, Johanna		ML12331A278	0319
Kraft, Dave	Nuclear Energy Information Service	ML13018A418	0157

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Kranzdorf, Richard		ML13022A549	0170
Kriesel, Robert		ML13023A386	0209
Kruszynski, Yasiu		ML13022A503	0326
Kuehn, Richard	Sierra Club	ML13022A514	0190
Kukovich, Kenneth M.		ML12335A008	0092
Kulp, Judy		ML12331A278	0303
Kunkel, Christopher		ML13022A222	0115
Kurtz, Sandra	Bellefonte Efficiency & Sustainability Team	ML13028A034	0256
Kutcher, Celia		ML13022A222	0115
Laambeth, Larry		ML12331A278	0319
Lacey, L. Darrell	Nye County Nuclear Waste Repository Project Office	ML13010A121	0244
Laing, Josephine		ML13028A008	0230
Lambert, Gwen		ML12320A361	0318
Lambert, Gwen		ML12331A278	0319
Lambert, Gwen		ML12354A128	0289
Lampert, Mary	Pilgrim Watch	ML12355A174	0118-11
Lampert, Mary	Pilgrim Watch	ML12355A174	0118-15
Lampert, Mary	Pilgrim Watch	ML12355A174	0118-26
Lampert, Mary	Pilgrim Watch	ML12355A174	0118-7
Lampert, Mary	Pilgrim Watch	ML12349A010	0148
Landau, Doug		ML12324A370	0040
Lane, Gary		ML12325A014	0045
Lang, Michael		ML13022A222	0115
Lanski, Christopher		ML13022A222	0115
Laramee, Eve		ML12331A353	0005-12
Laramee, Eve		ML12331A353	0005-17
Laramee, Eve		ML12325A018	0049
Larkin, Gail		ML13022A222	0115
Larson, Dennis		ML13007A401	0295
Larson, Jean		ML13022A222	0115
Laurie, Annie		ML13022A222	0115
Lawton-Singer, Cynthia		ML12320A361	0316
Lazzarini, Howard		ML13022A222	0115
Lee, Catherine		ML12331A278	0319
Leichtling, Don		ML13018A424	0163
Lemon, Patricia	Selectboard, Town of Warwick	ML13028A023	0248
Lenz, Andrew		ML13018A320	0130
Leonardi, Michael	Toledo Coalition	ML12331A353	0005-15

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Lesser, Gerson T.		ML12331A278	0319
Lester, Janet		ML13022A222	0115
Levin, John		ML13022A222	0115
Levine, Gregg		ML12355A174	0118-22
Levine, Gregg		ML12355A187	0119-10
Levine, Gregg		ML12355A187	0119-12
Levine, JR		ML12324A393	0002
Levey, Laura		ML12324A385	0001
Lewis, Marvin		ML12355A174	0118-14
Lewis, Marvin		ML12355A174	0118-21
Lewis, Marvin		ML13058A031	0223
Lewis, Marvin		ML123250525	0009
Lewis, Marvin		ML12332A225	0056
Lewis, Marvin		ML12334A401	0075
Lewis, Marvin		ML12340A151	0087
Lewis, Marvin		ML12348A034	0091
Lewis, Marvin		ML13023A402	0217
Lieberman, Andrea		ML12331A353	0005-8
Lieberman, Sharon and Jim		ML12331A278	0319
Lippman, Roger		ML12331A278	0319
Lish, Christopher		ML12331A278	0319
Lish, Christopher		ML13028A033	0266
Lochbaum, David		ML13010A123	0260
Lorwin, Lisa		ML13022A222	0115
Lukas, James		ML13022A222	0115
Lynch, Janette		ML13022A222	0115
M, Teresa		ML13018A202	0124
Mac Krell, Thomas		ML13018A205	0127
MacDonald, Joan		ML12331A278	0310
MacWaters, Chris		ML12334A392	0069
Mahowald, Philip R.	Prairie Island Indian Community	ML13010A132	0292
Mahowald, Philip R.	Prairie Island Indian Community	ML13017A008	0321
Mainland, Edward		ML13018A400	0141
Maiorca, Michelle		ML12324A296	0106
Makhijani, Arjun		ML12331A347	0004-6
Malina, Matt	NYC H2O	ML12324A374	0001
Mammarella, James		ML12331A278	0319
Maness, Mitchell		ML13023A385	0208

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
March, Leslie		ML13018A411	0152
Marcus, Jack Davis		ML13022A222	0115
Margos, J.F.		ML13022A222	0115
Mariotte, Michael	Nuclear Information and Resource Service	ML13022A223	0266
Martin, Brad		ML13022A222	0115
Martinez, Catherine	Sierra Club	ML13018A396	0137
Matsuda, Thomas		ML12331A278	0319
Matsuda, Thomas		ML12334A386	0063
Matsuda, Thomas		ML13022A500	0326
Maurer, William	PANA	ML123380151	0080
McCall, Charles		ML13022A222	0115
McCullough-Howard, Celeste	Women's International League for Peace and Freedom	ML13028A028	0252
McCullum, Brian		ML13022A222	0115
McComb, Melinda		ML12325A016	0047
McCormick, Bob		ML12331A278	0319
McCue, J.G.		ML12331A278	0319
McDonough, Susan		ML13022A222	0115
Meacham, Thomas		ML12331A278	0319
Meadow, Norman	Maryland Conservation Council	ML12331A353	0005-2
Meadow, Norman	Maryland Conservation Council	ML12331A353	0005-4
Milcarek, Thomas		ML13022A509	0206
Mohan, Debi		ML12325A013	0044
Monaster, Susan		ML12331A278	0319
Monroe, Victoria		ML13018A200	0122
Monsees, David		ML13023A394	0214
Morello, Phyl		ML13022A222	0115
Morris, Daniel		ML13022A222	0115
Morrison, George J.		ML12324A355	0031
Mouradian, Judy		ML12331A278	0319
Moyer, Heather		ML13022A222	0115
Moyer, Phoebe		ML13022A508	0205
Mueller, Kirstin		ML13022A222	0115
Murtha, William		ML13028A005	0227
Naples, Jean Marie		ML12335A301	0319
Naples, Jean Marie		ML12340A145	0083
Neiman, Laura		ML12324A303	0001
Neland, Vicki	Beyond Nuclear	ML12334A396	0073
Nelson, Scott D.		ML12331A278	0319

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Nichols, John		ML12331A278	0319
Nichols, John		ML12340A027	0312
Nichols, John		ML123380141	0093
Nicholson, Larry	Florida Power and Light	ML13007A399	0302
Niles, Ken	Western Interstate Energy Board	ML13010A122	0270
Nord, Jill		ML13022A547	0168
North, D. Warner		ML13030A026	0278
North, D. Warner	Sustainable Fuel Cycle Task Force	ML13030A023	0280
O'Connell, Brian	National Association of Regulatory Commissioners	ML13010A125	0233
O'Leary, David		ML13022A222	0115
O'Neill, Kevin		ML12324A375	0007
O'Neill, Kevin		ML12319A467	0097
Oberlin, Carl		ML13022A222	0115
Oconnell, Daniel		ML13022A222	0115
Oehler, Susan		ML13022A222	0115
Olsen, Corey E.		ML12331A278	0319
Olson, Mary	Southeast Office of Nuclear Information and Resource Service	ML12331A347	0004-16
Olson, Mary	Southeast Office of Nuclear Information and Resource Service	ML12355A187	0119-5
Ostrer, Allison		ML12331A278	0319
Ower, Douglas		ML13028A017	0241
Page, Nicholas		ML13022A222	0115
Pagoulatos, Alexis		ML12331A278	0319
Palmer, R. Brent		ML13022A222	0115
Pasquale, Elizabeth		ML12324A358	0034
Pate, Ann		ML12331A278	0319
Patrie, Lewis	WNC Physicians for Social Responsibility	ML13028A014	0238
Payton, Renee		ML13022A222	0115
Peirce, Susan		ML13022A222	0115
Pelham, Christopher		ML12331A278	0319
Pelizzari, Roger		ML12331A278	0319
Pelizzari, Roger		ML12324A279	0012
Perkins, Bob		ML12331A278	0319
Pfaelzer, Morgan		ML13022A222	0115
Philbrook, Pati		ML12331A278	0319
Phillips, Stuart		ML12331A278	0319
Phillips, Stuart		ML12325A052	0051



<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Piarulli, Josephine		ML12331A278	0319
Pick, Anna		ML12331A278	0319
Pino, Dolores C.		ML13022A222	0115
Pirch, Charlotte		ML12320A361	0315
Poole, Jesse		ML12342A278	0088
Portszline, Scott	Three Mile Island Alert	ML12331A347	0004-24
Poulson, Judi	Fairmont MN Peace Group	ML12324A280	0013
Poulson, Judi		ML12331A278	0319
Poulson, Judi		ML12340A146	0083
Poulson, Judi		ML13022A497	0199
Preston, Lynne		ML12331A278	0319
Priestly, Meredith		ML13022A222	0115
Prior, Barbara		ML13022A222	0115
Prola, Jim and Diana		ML13022A222	0115
Pruitt, Steve and Alicia		ML13018A410	0151
Puca, Rob		ML12324A315	0001
Puett, David		ML13018A203	0125
Pyburn, Susan		ML13022A501	0200
Rafacz, Bernard		ML13022A222	0115
Rattner, Ron		ML13022A222	0115
Rea, Paul		ML13018A395	0136
Reel, Joseph		ML13022A222	0115
Reischke, Ysan		ML13022A222	0115
Renn, Melissa		ML13018A326	0135
Repka, David		ML12331A347	0004-20
Reynolds-Sparks, Darla		ML13028A024	0249
Ribnick, Lawrence		ML13022A222	0115
Richards, Jay		ML12324A278	0011
Richardson, Don		ML12331A278	0306
Richkus, John		ML12331A278	0319
Richkus, John		ML12324A347	0001
Rigby, Cheri		ML13022A222	0115
Riggs, George		ML13028A006	0229
Riley, Christine L.		ML12320A361	0314
Rivers, Alicia	Sierra Club	ML12355A187	0119-14
Roane, Christine		ML12331A278	0319
Roane, Christine		ML12324A323	0015
Roberts, James		ML13022A559	0179
Robertson, Kenneth		ML13022A222	0115

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Robinson, Julie		ML13022A222	0115
Rogers, Karen		ML12331A278	0319
Roland, Jelica		ML12331A278	0319
Roseboom Jr., Eugene H.		ML13017A109	0320
Roseboom Jr., Eugene H.	Sustainable Fuel Cycle Task Force	ML13030A023	0280
Rosen, Kay		ML13022A222	0115
Roskos, Laura	Women's International League for Peace and Freedom, US Section	ML13011A085	0277
Roth, Erik		ML12331A278	0319
Rupar, Randy		ML13022A222	0115
Rusch, Joann	Mothers for Peace/Sierra Club	ML13022A564	0184
Ryan, Sarah		ML13022A222	0115
S., Erin		ML13022A222	0115
Safer, Don	Tennessee Environmental Council	ML12355A174	0118-16
Safer, Don	Tennessee Environmental Council	ML12355A174	0118-24
Safer, Don	Tennessee Environmental Council	ML12355A174	0118-3
Saftler, Michael	ACTelluride	ML13018A423	0162
Salazar, Joe		ML12331A278	0319
Salazar, Joe		ML12340A147	0083
Sanders, Marshall		ML13022A492	0195
Savett, Adam		ML13022A490	0215
Schlamm, Rhoda		ML12324A305	0108
Schmotzer, Michael		ML13018A201	0123
Schor, Mary		ML12331A278	0319
Schuchart, Lawrence		ML12331A278	0319
Schwartz, Eric	Hagerstown Community College	ML13018A323	0132
Schweiss, Kraig and Valerie		ML13022A222	0115
Scott, Barbara		ML13022A515	0191
Scott, Cathy		ML13028A012	0236
Seeley, Rick		ML12331A278	0319
Selquist, Donna		ML12334A393	0070
Selquist, Donna		ML13022A493	0194
Sembrowich, Nita		ML12331A278	0319
Settanni, Anne		ML13022A222	0115
Seyfried, Mike		ML13022A222	0115
Shaffer, Matthew		ML13022A222	0115
Shafnisky, Luke		ML13022A222	0115

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Shakarian, Jana		ML12324A361	0036
Shapiro, Susan	Indian Point Energy Coalition	ML13007A402	0296
Shapiro, Susan		ML12331A347	0004-25
Shaw, Sally		ML12331A278	0307
Shaw, Sally		ML12331A278	0319
Shaw, Sally		ML13018A406	0147
Shea, Kelly		ML13022A222	0115
Sheehan, Margaret	Pilgrim Coalition	ML12331A347	0004-23
Sheehan, Margaret	Pilgrim Coalition	ML12355A174	0118-19
Shepard, Larry	U.S. EPA, Region 7	ML12355A174	0118-6
Sheridan, Paul	MN Peace Group	ML12324A340	0017
Sheridan, Paul	MN Peace Group	ML12334A391	0068
Sheridan, Paul	MN Peace Group	ML13022A223	0266
Shields, Lane		ML13009A341	0319
Shifrin, Allen		ML13022A222	0115
Shomer, Forest		ML12331A278	0319
Shoop, Pamela		ML12331A353	0005-13
Shuput, Steve		ML12334A395	0072
Silberg, Jay	Pillsbury Winthrop Shaw Pittman	ML12331A347	0004-27
Silbey, Marilena		ML12331A278	0319
Silver, Barrett	Riverkeeper	ML111111111	0222
Silver, Ron		ML12331A278	0319
Silverman, Don	Morgan, Lewis & Brockius	ML12331A347	0004-10
Simmerman, Scott		ML12331A278	0305
Simmons, Carole		ML13022A222	0115
Simmons, Ymani		ML13022A222	0115
Sipos, John	State of New York	ML12331A347	0004-5
Sipos, John	State of New York	ML13007A398	0275
Skrzynecki, Richard		ML13022A222	0115
Slade, Matt		ML13022A222	0115
Slezak-Fritz, Joan		ML13018A404	0145
Slotnick, Lauryn		ML13023A387	0210
Small, Sally		ML12331A278	0319
Smith, Mike	MN Peace Group	ML12324A341	0018
Smith, Wiley		ML13022A222	0115
Sorensen, Laura	SAFE Carolinas	ML13010A135	0274
Sorensen, Laura		ML12355A187	0119-7
Sorensen, Ole		ML13028A029	0261
Sorgen, Phoebe	Fukushima Response Bay Area	ML12334A403	0076

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Sorrell, William H.	State of Vermont	ML13007A398	0275
Sparks, Jeanne		ML13022A222	0115
ssf, Edmund		ML12331A278	0319
Stadnik, George		ML13022A222	0115
Stanley, Edh		ML13022A488	0193
Star, Priscilla		ML12331A353	0005-11
Stavely, Jary		ML13022A222	0115
Stein, Julia		ML13022A222	0115
Steiner, Danny		ML12332A226	0057
Stone, Lisa		ML13022A222	0115
Straw, Sara		ML13018A408	0149
Strawn, Michael		ML13022A222	0115
Strickland, Christine		ML12331A353	0005-10
Strickland, Christine		ML12331A353	0005-16
Struble, Dan		ML13022A222	0115
Suter, Lindsay		ML12331A278	0319
Swanson, Jane	San Luis Obispo Mothers for Peace	ML12324A298	0114
Swyers, Matthew		ML12331A278	0319
Swyers, Matthew		ML12334A389	0066
Szokolai, Maria		ML13022A222	0115
Tache, Jan		ML12331A278	0319
Talbot, James		ML12331A278	0319
Tallent, Yvonne		ML13022A222	0115
Taylor, Wallace	Sierra Club	ML13023A391	0213
Taylor, Wendi	Sierra Club	ML13018A421	0160
Tepper, Carol		ML13022A222	0115
Thomas, Ruth	Environmentalists, Inc.	ML12331A347	0004-17
Thomas, Ruth	Environmentalists, Inc.	ML13028A013	0237
Tibbits, Kathy		ML13007A403	0297
Tignanelli, Doreen		ML12324A344	0001
Tokuda, Tlaloc		ML12331A278	0319
Torres, Madge		ML13022A546	0167
Trager, Jami		ML13022A222	0115
Treichel, Judy	Nuclear Waste Task Force	ML12331A347	0004-22
Unger, Art		ML12325A054	0053
Unknown, Ralph		ML13022A222	0115
Vale, Karen		ML12340A148	0084
Valentine, Jennifer		ML12319A466	0001
Valtri Burgess, Vivian		ML13022A513	0189

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Van Stone, Carolina		ML12331A278	0319
VanWicklen, Betty J.		ML13018A321	0129
Varekamp, Patrick		ML12325A011	0001
Vaughan, Leila		ML13022A222	0115
Voeller, Estelle		ML12331A278	0319
Vollmer, Terry		ML12331A278	0319
von Christierson, Peter		ML13018A420	0159
Vora, Davina		ML13022A222	0115
Wachob, William		ML12331A278	0319
Waddell, W. Duane		ML13022A562	0182
Wakefield, Marie		ML13023A388	0326
Wallace, Don		ML12331A278	0319
Wallace, Martin	Saner Living Neighborhood Association	ML13028A164	0228
Walters, Catherine		ML13022A222	0115
Warren, Barbara	Citizens Environmental Coalition	ML13010A130	0269
Warren, Barbara	Physicians for Social Responsibility	ML12355A174	0118-13
Warren, Barbara	Physicians for Social Responsibility	ML12355A174	0118-4
Warren, Barbara	Physicians for Social Responsibility	ML13018A325	0134
Warren, Richard C.		ML12331A278	0319
Warshauer, Meira	Environmentalists, Inc.	ML13028A037	0336
Watts, Elizabeth		ML13022A222	0115
Weart, Wendell	Sustainable Fuel Cycle Task Force	ML13030A023	0280
Weber, Nicole		ML13023A401	0232
Wedow, Nancy		ML13022A222	0115
Weiner, Ruth		ML13030A023	0280
Weisenmiller, Robert B.	California Energy Commission	ML13010A133	0272
Weisman, David	Alliance for Nuclear Responsibility	ML12331A347	0004-15
Wentland, Mary		ML13018A425	0164
Whitefield, Anne	NC Warn	ML13028A015	0239
Wilder, Laura		ML12331A278	0319
Wildermuth, Gordon		ML13022A222	0115
Wildwind, Landry		ML12331A278	0319
Wiley, JiYoung	Louisiana Department of Environmental Quality	ML12348A036	0096
Williams, Curt		ML12325A053	0052
Williams, Terry J.		ML13022A222	0115
Wilvert, Cal		ML13022A563	0183
Wilvert, Rosemary		ML13022A548	0169
Winholtz, Betty		ML12331A278	0319

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>ADAMS Accession #</b>	<b>Correspondence ID</b>
Winholtz, Betty		ML12334A383	0060
Winograd, Isaac	Sustainable Fuel Cycle Task Force	ML13030A023	0280
Wolf, Rachel		ML12331A278	0319
Wollman, Michael		ML13022A504	0202
Wolski, Mike		ML13022A222	0115
Wong, Houston		ML13022A222	0115
Wood, Richard		ML13023A389	0211
Woodcock, Charlene		ML13022A222	0115
Wright, David A.	Nuclear Waste Strategy Coalition	ML13010A129	0268
Wynne, Diane		ML13022A222	0115
Yeatts, Jordan		ML13018A417	0156
York, Jennifer		ML12321A324	0311
Young, Nancy		ML13022A222	0115
Zalcman, Barry		ML13030A017	0283
Zamek, Jill		ML13022A222	0115
Zeller, Lou	Blue Ridge Environmental Defense League	ML12331A347	0004-14
Zeller, Lou	Blue Ridge Environmental Defense League	ML12355A174	0118-12
Zeller, Lou	Blue Ridge Environmental Defense League	ML12355A174	0118-23
Zeller, Lou	Blue Ridge Environmental Defense League	ML12355A174	0118-27
Zeller, Lou	Blue Ridge Environmental Defense League	ML12355A174	0118-5
Zeller, Lou	Blue Ridge Environmental Defense League	ML13007A359	0273
Zerzan, Paula		ML13022A222	0115
Zigmund, Sean		ML12324A379	0021
Zimmerman, Warren		ML13018A426	0165
Zmolek, Mike		ML12331A278	0319
Zucker, Lee		ML12331A278	0319

**E. List of Commenters on the December 2011 Draft Report,  
“Background and Preliminary Assumptions for an Environmental  
Impact Statement—Long-Term Waste Confidence Update”**

<b>Commenter Name</b>	<b>Commenter Affiliation</b>	<b>Comment Date</b>	<b>ADAMS Accession Number</b>
Alex Cole		26-Feb-12	ML12059A619
Allison Ostrer		24-Feb-12	ML12059A504
Anna A. Pick		24-Feb-12	ML12059A282
Art Hanson		25-Feb-12	ML12059A617
Aurora & Raul Insurriago		28-Feb-12	ML12061A010
Barbara Byron, Ken Niles	Western Interstate Energy Board (WIEB) High-Level Waste Committee	17-Feb-12	ML12052A044
Beatrice Brailsford	Snake River Alliance	17-Feb-12	ML12052A051
Bernard Bevill	Arkansas Department of Health, Radiation Control Section	16-Feb-12	ML12048A281
Berton Moldow		24-Feb-12	ML12059A503
Beth Anne Boardman		30-Jan-12	ML12033A003
Bettina Barbier		24-Feb-12	ML12059A522
Bill Brown		24-Feb-12	ML12058A557
Brian O'Connell	National Association of Regulatory Utility Commissioners (NARUC)	16-Feb-12	ML12048A305
Brian O'Connell	National Association of Regulatory Utility Commissioners (NARUC)	22-Feb-12	ML12055A124
Byron L. Davis, Ph.D.	Center for High Performance Computing, Univ. of Utah, Staff Consultant for Stat. & Rsch Method	24-Feb-12	ML12058A560
Carroll E. Arkema		24-Feb-12	ML12059A494
Caryn Graves		24-Feb-12	ML12058A545
Charles Brobst		24-Feb-12	ML12059A498
Charles Fairhurst, D. Warner North, Ruth Weiner, Isaac Winograd, Wendell Weart, Eugene H. Roseboom Jr.	Sustainable Fuel Cycle Task Force	17-Feb-12	ML12052A053
Charlotte Sumrow-Pirch		24-Feb-12	ML12059A557
Christine M. Roane		24-Feb-12	ML12059A010

<b>Commenter Name</b>	<b>Commenter Affiliation</b>	<b>Comment Date</b>	<b>ADAMS Accession Number</b>
Crystal Rose Starheart		25-Feb-12	ML12059A613
Crystal Rose Starheart		25-Feb-12	ML12059A614
Dan Danziger		24-Feb-12	ML12058A406
Daniel Shively		27-Feb-12	ML12059A627
Daral Reynolds-Sparks		25-Feb-12	ML12059A599
Darlene St. Martin		24-Feb-12	ML12059A525
Dave P. & Louise S. Ransom		24-Feb-12	ML12058A547
David A. Wright	Nuclear Waste Strategy Coalition (NWSC)	17-Feb-12	ML12052A046
David Greene		27-Feb-12	ML12059A628
David Houseman		25-Feb-12	ML12059A595
David Weisman	Alliance for Nuclear Responsibility	25-Jan-12	ML12026A047
Diane Curran, Geoffrey Fettus	Blue Ridge Environmental Defense League (BREDL), the Institute for Energy and Environmental Research (IEER), Natural Resources Defense Council (NRDC), Riverkeeper, and Southern Alliance for Clean Energy (SACE)	17-Feb-12	ML12052A047
Diane D'Arrigo, Moe Headington, Judy Treichel, Charles Utley, Don Safer, Pam Moffit, Tom Clements, Paula Gotsch	Alliance for Nuclear Accountability; Blue Ridge Environmental Defense League; Episcopal Peace Fellowship (Chicago); Grandmothers, Mothers and More for Energy Safety (NJ); Nevada Nuclear Waste Task Force; Nuclear Information and Resource Service; Stand Up Save Lives (IL); Tennessee Environmental Council	16-Feb-12	ML12047A007
Dolores A. Pieper		28-Feb-12	ML12061A013
Donna Gilmore		26-Jan-12	ML12027A206
Doris Fulton		26-Feb-12	ML12059A621
Douglas Gerleman		26-Feb-12	ML12059A624
Dr. Darrell D. Davisson, Ph.D.		24-Feb-12	ML12059A578
Dr. Mha Atma S. Khalsa		24-Feb-12	ML12059A497
Dr. William H. Whitaker		26-Feb-12	ML12059A622
Elena Day		24-Feb-12	ML12059A002



<b>Commenter Name</b>	<b>Commenter Affiliation</b>	<b>Comment Date</b>	<b>ADAMS Accession Number</b>
Elizabeth Butler		24-Feb-12	ML12058A561
Eric Morris		28-Feb-12	ML12061A011
Gail Payne		24-Feb-12	ML12058A392
Gary Lane		6-Jan-12	ML12010A142
Gene Stone	Residents Organized For a Safe Environment (ROSE), CA	24-Jan-12	ML12026A043
Gerard F. Gaudin		24-Feb-12	ML12059A003
Gerson T. Lesser, M.D.		24-Feb-12	ML12059A527
Grant R. Shafer		29-Feb-12	ML12061A016
Greg Sutherland		24-Feb-12	ML12059A553
Gwen Lambert		25-Feb-12	ML12059A594
Hendrica Regez		24-Feb-12	ML12058A540
J.A. Gresham	Westinghouse	17-Feb-12	ML12048A873
J.J. Saecker		24-Feb-12	ML12059A271
James Concannon		16-Jan-12	ML12017A125
James M. Nordlund		25-Feb-12	ML12059A593
Jan Tache		24-Feb-12	ML12058A544
Jayne Hamilton		24-Feb-12	ML12059A276
Jeanie Johnson		24-Feb-12	ML12059A499
Jeffrey M. Skov		17-Feb-12	ML12052A045
Jennifer M. Weishaar		28-Feb-12	ML12061A012
Jerry Weiser		4-Jan-12	ML12010A144
Jim Bell		24-Feb-12	ML12058A558
Joe Salazar		24-Feb-12	ML12059A575
Joel Kay		24-Feb-12	ML12059A555
John H. Kessler	Electric Power Research Institute (EPRI)	17-Feb-12	ML12052A050
John M. Ackerman, M.D.		25-Feb-12	ML12059A607
John Ventre		24-Feb-12	ML12059A523
John Viacrusis		24-Feb-12	ML12059A524

<b>Commenter Name</b>	<b>Commenter Affiliation</b>	<b>Comment Date</b>	<b>ADAMS Accession Number</b>
Jonathan Bailin, Ph.D.		25-Feb-12	ML12059A616
Joyce & Ronald Mason		24-Feb-12	ML12059A560
Joyce Frohn		24-Feb-12	ML12059A280
JT		24-Jan-12	ML12026A044
Judith E. Klein		25-Feb-12	ML12059A604
Kaitlin Nichols		24-Feb-12	ML12059A520
Karry Muzzey		27-Feb-12	ML12059A626
Kathe Garbrick		24-Feb-12	ML12059A006
Kathleen Ward		25-Jan-12	ML12026A045
Kenneth J. Gunther		24-Feb-12	ML12059A004
Kiwibob Glanzman		25-Feb-12	ML12059A611
Laura Bernstein		24-Feb-12	ML12059A278
Laurence Kirby		25-Feb-12	ML12059A601
Lawrence Turk, R.N.		29-Feb-12	ML12061A015
Lee Baily, Ph.D.		24-Feb-12	ML12058A541
Leslie Limberg		24-Feb-12	ML12058A542
Leslie Limberg		24-Feb-12	ML12058A559
Leslie Tawnamaia		24-Feb-12	ML12058A546
Lewis Darrell Lacy	Nye County Nevada Waste Repository Project Office	16-Feb-12	ML12048A326
Lewis McGregor		24-Feb-12	ML12059A275
Linda & Lewis Paleias		25-Feb-12	ML12059A600
Lisa Gosnell		24-Feb-12	ML12058A539
Lisa R. Janairo	Council of State Governments Midwestern Radioactive Materials Transportation Committee	16-Feb-12	ML12048A270
Lynn Wilbur		24-Feb-12	ML12058A405
M. Kelly Sutton, M.D.		24-Feb-12	ML12059A576
M. Ross Adams		26-Feb-12	ML12059A623
Marcy Vaj		24-Feb-12	ML12059A279

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Margaret Dunn		26-Feb-12	ML12059A620
Marie Wakefield		24-Feb-12	ML12059A551
Mark Hayduke		24-Feb-12	ML12059A561
Mark Kwasny		4-Jan-12	ML12010A149
Marthea Rountree	Environmental Protection Agency	15-Feb-12	ML12047A005
Mary Neland		24-Feb-12	ML12059A573
Maura Derey		27-Feb-12	ML12059A629
Michael S. Callahan	Decommissioning Plant Coalition	16-Feb-12	ML12052A063
Michele Johnson, M.D.		24-Feb-12	ML12059A521
Mike Smith		24-Feb-12	ML12059A272
Millicent Sims		24-Feb-12	ML12059A574
Mo Sandel		24-Feb-12	ML12058A538
Monroe Edwin Jeffrey		24-Feb-12	ML12058A543
Naomi Zuckerman		24-Feb-12	ML12059A559
Nita Sembrowich		24-Feb-12	ML12059A495
Pati Philbrook		24-Feb-12	ML12059A501
Patricia Jerrells		25-Feb-12	ML12059A608
Patricia Moore		24-Feb-12	ML12058A399
Patricia Orlinski		24-Feb-12	ML12059A580
Patrick Bosold		24-Feb-12	ML12059A526
Paul Franzmann		24-Feb-12	ML12059A577
Paul Roden		24-Feb-12	ML12059A005
Paula Hendrick		25-Feb-12	ML12059A597
Peter Broderson		25-Feb-12	ML12059A596
Philip R. Mahowald	Prairie Island Indian Community	17-Feb-12	ML12048A867
R. Fay		25-Feb-12	ML12059A615
Randall Hartman		24-Feb-12	ML12059A009
Randall Webb		24-Feb-12	ML12059A582

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Rebecca Tippens		24-Feb-12	ML12059A277
Robert J. Halstead	State of Nevada Agency for Nuclear Projects	17-Feb-12	ML12052A040
Robert Kenny & Julia Glover		24-Feb-12	ML12059A562
Robert Mihaly		25-Feb-12	ML12059A591
Rod McCullum	Nuclear Energy Institute	16-Feb-12	ML12048A295
Ron Smith		24-Feb-12	ML12058A556
Ronald S.Katz		24-Feb-12	ML12059A554
Sandra Cobb		24-Feb-12	ML12059A493
Sandra J. Bader		24-Feb-12	ML12059A502
Sandy Sanders		24-Feb-12	ML12059A001
Sarah Preston Tiers		24-Feb-12	ML12059A496
Sarah Woodside Gallagher		24-Feb-12	ML12059A000
Scott Nass, M.D., M.P.A.		25-Feb-12	ML12059A590
Seth Carr		24-Feb-12	ML12058A409
Shari Horne		25-Jan-12	ML12026A046
Sharon & Jim Lieberman		25-Feb-12	ML12059A605
Shellee Davis		24-Feb-12	ML12059A274
Sidney Keener, P.E.	URS	4-Jan-12	ML12010A146
Steve Behling		11-Jan-12	ML12012A002
Steve Michaelson		5-Jan-12	ML12010A143
Steve Netherby		27-Jan-12	ML12027A207
Steve Roddy		25-Feb-12	ML12059A609
Susan Peirce		25-Feb-12	ML12059A606
Sybil Schlesinger		25-Feb-12	ML12059A598
Tabor Browder		26-Feb-12	ML12059A618
Terry Ellen Robinson		24-Feb-12	ML12059A518
Theodore Wilcox, PhD		24-Feb-12	ML12059A007
Thomas Lindeman		25-Feb-12	ML12059A603

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Thomas Paulson		25-Feb-12	ML12059A610
Tim Leighton		24-Feb-12	ML12058A537
Tim Steorts		25-Feb-12	ML12059A612
Tom Carsner		24-Feb-12	ML12059A581
Tom Clements	Alliance for Nuclear Accountability	10-Feb-12	ML12045A096
Tom Liberatore		28-Feb-12	ML12061A014
V.E. Perkins, Ph.D.		24-Feb-12	ML12059A556
Vernon Huffman		23-Dec-11	ML12010A151
Vernon Huffman		30-Dec-11	ML12010A150
Veronica Hayes		24-Feb-12	ML12059A273
Wallace L. Taylor	Iowa Chapter of the Sierra Club	13-Feb-12	ML12045A141
Wendy Fast		24-Feb-12	ML12059A517
Will Yeager		25-Feb-12	ML12059A583
William D. Rizer		24-Feb-12	ML12059A008
William Saenz		26-Feb-12	ML12059A625
William Wilgus		24-Feb-12	ML12059A550