

# Public Comments on Draft ISG

## A. Introduction

On January 10, 2014, the U.S. Nuclear Regulatory Commission (NRC) published a request for comments on a draft to an Interim Staff Guidance (ISG) document, NSIR/DPR-ISG-02, "Emergency Planning Exemption Requests for Decommissioning Nuclear Power Plants" (Agencywide Document Access and Management System (ADAMS) Accession No. ML13304B442), in the *Federal Register* (79 FR 1900) under Docket Number (No.) NRC-2014-0002 at [www.regulations.gov](http://www.regulations.gov). The initial 60-day comment period was extended for 30 additional days and expired on April 10, 2014. In addition, a public meeting was held by the NRC staff in Rockville, MD on March 6, 2014, to discuss the proposed ISG and solicit stakeholder input (ADAMS Accession No. ML14091B133). Comments made at the meeting were also considered in the revisions of the ISG; however, specific comment responses were not prepared.

The NRC received 22 responses to the request for comments, which can be located under ADAMS Package Accession No. ML14225A717. Responses were received from 15 private citizens and the following 7 organizations:

- Nuclear Energy Institute (NEI)
- Beyond Nuclear
- Franklin Regional Council of Governments
- Pilgrim Watch, in conjunction with the Town of Duxbury Nuclear Advisory Committee, Cape Downwinders, and Pilgrim Coalition
- Vermont Department of Public Service, Division of Emergency Management and Homeland Security
- American Red Cross, Vermont & the New Hampshire Upper Valley Region
- Concerned Neighbors of Pilgrim.

## B. General Overview of Comments

### 1. Comments from Private Citizens

None of the 15 private citizen commenters supported any reduction in emergency preparedness (EP) for decommissioning plants. Of those, two would support some reduction in emergency preparedness at a decommissioning plant when all spent fuel in the plant's spent fuel pool is transferred to dry cask storage. Eight of the 15 comments were directed specifically at proposed changes to emergency preparedness requirements related to decommissioning of the Vermont Yankee Nuclear Power Station. None of the comments proposed specific changes to the draft ISG, but all were critical of the intent of the document to allow a reduction in formal offsite radiological emergency preparedness programs.

### 2. Comments from Organizations

- a. **NEI**, representing the nuclear industry provided 67 total comments representing the nuclear industry.

Twenty-four (24) specific comments provided by NEI were associated with draft ISG Table 1, "Exemptions for Consideration." NEI's comments included proposed additions to the regulation exemption considerations and some suggestions for rewording.

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The remaining comments associated with Table 1 were editorial in nature or provided clarification. Six (6) comments were associated with Sections 1 through 5 (purpose, scope, background overview of existing guidance and other information) and were also editorial comments or clarifications (e.g., “this guidance is only applicable to a nuclear power plant licensee reactor that has notified the NRC...”).

The remaining comments from NEI were associated with ISG Attachment 1, “Guidance for Evaluation of Emergency Plans.” This guidance is being revised to reflect remaining evaluation criteria contained in Section II of NUREG-0654/FEMA-REP-1 (Revision 1), “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” (ADAMS Accession No. ML12339A625) which would be applicable to a permanently defueled emergency plan (PDEP) based on the exemptions for consideration provided in Table 1 of the ISG.

- b. **Beyond Nuclear** stated that the assumptions used in the ISG are non-conservative. They describe some scenarios in which spent fuel pools (SFPs) and independent spent fuel storage installations (ISFSIs) could be vulnerable to attack by private aircraft, incendiary rockets or other high explosives, and concluded that the threat of such actions warrant continued emergency planning and preparedness. Beyond Nuclear supports maintaining full offsite emergency preparedness as long as any irradiated nuclear fuel is onsite.
- c. **Franklin Regional Council of Governments** wrote in opposition to elimination of emergency planning for communities within the plume exposure pathway emergency planning zone (EPZ) for the Vermont Yankee Nuclear Power Station and requested an increase in the EPZ from 10 to 50 miles.
- d. **Pilgrim Watch, in conjunction with the Town of Duxbury Nuclear Advisory Committee, Cape Downwinders and Pilgrim Coalition**, wrote in support of maintaining offsite emergency planning with all costs borne by the licensee as long as fuel remains onsite. The commenter also mirrored those comments of Beyond Nuclear, concerning the assumptions used in the ISG as the bases for exemptions.
- e. **Vermont Department of Public Service, Division of Emergency Management and Homeland Security** objected to the exemption process because it “essentially eliminates any thorough or effective public participation,” and it would allow licensees to “avoid their responsibilities to the communities and states where they are located.” They propose that the NRC undertake rulemaking to allow for any reduction in emergency preparedness at decommissioning facilities. The Department cites issues at the U.S. Department of Energy (DOE) regulated facilities as support for its assertion that NRC regulation and oversight is ineffective at protecting the environment, and the health and safety of the public. It also states the proposed ISG ignores consideration of high burn-up spent fuel and the effects of its long term storage in SFPs on deterioration of neutron absorber materials and fuel cladding. The commenter concludes by saying that the ISG should be withdrawn, and the NRC should make particular efforts to reach out to local communities and host States before exempting decommissioned reactors from otherwise applicable regulations.

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- f. **American Red Cross, Vermont and the New Hampshire Upper Valley Region** does not support exemptions for any decommissioning nuclear power plants. The commenters' view is that the NRC should not assume that all potential risks associated with a decommissioning nuclear facility are known and understood.
- g. **Concerned Neighbors of Pilgrim** advocates for maintaining full emergency planning at nuclear power plants during and after decommissioning.

### C. NRC Consideration of Comments

The revised ISG reflects the NRC staff's consideration of all 22 submittals of comments and the dialogue that occurred at the public meeting on the draft ISG. The NRC was able to group most of the comments around themes. Staff responses to categories of comments are provided below. Table 1 is a list of commenters. Commenter ID numbers are used at the end of each comment summary below to relate commenters to the comment summaries. The complete comments can be seen by using the ADAMS Accession numbers on Table 1 or by accessing them at ADAMS Accession number ML14225A717.

1. Two commenters stated that the risks associated with a decommissioning nuclear power plant are higher than at an operating nuclear power plant. (11,17)

**NRC Response:** The NRC does not agree with the comments. It is true that a SFP at a decommissioning plant would normally contain more fuel assemblies than would be present in a single operating reactor core. However, as explained in the ISG, without the driving force of high temperatures and pressures, there are fewer potential accident scenarios which could lead to a significant offsite radiological release that exceed the U.S. Environmental Protection Agency's (EPA) Protective Action Guidelines (PAGs) at the nuclear power reactor's exclusion area boundary (EAB). As the spent fuel ages, its ability to generate heat diminishes due to the decay of fission products. Unlike operating reactor accident sequences that could lead to a large early release, accident scenarios at decommissioning plant SFPs evolve slowly and would provide adequate time to initiate mitigative or protective actions, such that at the time the exemption goes into effect, the risk is expected to be considerably lower than the risk from the operating reactor. No changes were made to the ISG as a result of these comments.

2. Commenters stated that exemptions should not be granted until all fuel is removed from the site or placed into dry cask storage, and that the licensees should be responsible for all offsite emergency response. (4, 10, 11, 16, 17, 21, 22, 24)

**NRC Response:** The NRC disagrees with these comments. Licensees will remain responsible for onsite radiological emergency planning, including coordination of offsite law enforcement, firefighting and medical services that may be required onsite. State and local entities remain responsible for offsite emergency response.

NRC regulations allow for exemptions, properly justified by the applicant, in cases where the underlying purpose of the regulation no longer applies to the activities of the licensee. As stated in Commission paper SECY-14-0118 (ADAMS Accession No. ML14219A444), when a reactor permanently ceases operation, the underlying purpose of the EP regulations concerning offsite EP may no longer be applicable because, without the high pressures, temperatures, and decay heat associated with an operating reactor, there are fewer possible accident scenarios that could affect the public.

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If an exemption from formal offsite EP requirements were to be granted to a licensee, the licensee would no longer be responsible for ensuring that State and local governments maintain formal radiological emergency response plans that meet Federal Emergency Management Agency (FEMA) Radiological Emergency Preparedness (REP) Program requirements in Title 44 of the *Code of Federal Regulations* (44 CFR) Part 350, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness." These exemptions would allow the licensee to focus its emergency planning resources on the remaining, greatly reduced, radioactive risks to the onsite workers and the public.

No changes were made to the ISG as a result of these comments.

3. Two commenters referred NRC staff to a document entitled, "Environmental Impacts of Storing Nuclear Fuel and High-Level Waste from Commercial Nuclear Reactors: A Critique of NRC's Waste Confidence Decision and Environmental Impact Determination," authored by Dr. Gordon Thompson. The commenters suggested that Dr. Thompson's document provided more reliable information than the studies quoted in the ISG. (4,16)

**NRC Response:** The NRC is aware of the referenced study. The technical basis for this ISG are described in sections 4.0 and 5.0. The NRC considers the technical basis presented to be adequate.

No changes were made to the ISG as a result of these comments.

4. One commenter stated that the NRC, through its use of the ISG, would allow exemption from offsite emergency planning requirements after 12 months. (16)

**NRC Response:** The ISG does not state any minimum elapsed time from permanent shut down and defueling before an exemption could be approved. The reference to "approximately 12 months" was the staff's estimate of when site-specific analyses would show that spent fuel met the decay heat criteria in the ISG. The ISG states that an exemption request requires a site-specific analysis to define the date when exemptions could be permitted. The required analysis must show that the amount of time from the point when both water and air cooling is lost to the spent fuel until the hottest fuel assembly reaches 900°C will be at least 10 hours so mitigating actions or, if necessary, protective actions using a CEMP approach can be taken.

The struckout language was removed from the following sentence in the ISG:

"Table 1 depicts the potential exemption requests, based on the staff's experience, ~~for the time period beginning approximately 12 months after the final reactor shutdown,~~ when the only event that could lead to an offsite dose exceeding EPA PAGs is a zirconium fire and the licensee has sufficient time to initiate mitigating actions for the event."

5. Commenters stated that the basis for the proposed ISG is largely focused on the assumption that a drained SFP can be refilled in a 10-hour period or that, contrary to the ISG, there is no reasonable assurance that there will be time for preventative and mitigative actions. (16, 20, 24)

**NRC Response:** The NRC does not agree with the comments. Because spent fuel can be effectively cooled by water, steam, or air, the likelihood of fuel overheating to the point of radiological release depends on several factors: (1) how much residual heat the fuel generates; (2) the fuel loading pattern; and (3) the timing, location, and size of the SFP liner leakage. The 10-hour criterion assumes a simplified scenario involving the rapid loss of SFP water inventory

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resulting in a loss of both air and water cooling to the spent fuel, and is intended to establish a minimum time frame available to initiate mitigating actions, or if needed, to initiate offsite protective actions using a CEMP approach. Since this postulated scenario conservatively does not consider the time from the initiating event to a loss of all cooling to the spent fuel, additional time would be available to initiate mitigation measures. The spent fuel is not required to be fully submerged and can be adequately cooled by various means including a water spray onto the spent fuel. The NRC requires that licensees maintain onsite equipment, procedures, and on-shift, trained personnel necessary to provide alternate spent fuel cooling, in the unlikely event of a SFP drain down, via Technical Specifications and license conditions. Given the designated mitigation strategies required to be identified by the licensee and the simplified, conservative assumptions used for heat up analyses, the staff believes the 10-hour time period provides reasonable assurance that actions can and will be taken if required to protect the health and safety of the workers and the public in the event of an accident affecting the SFP.

No changes were made to the ISG as a result of these comments.

6. Commenters raised concerns that the NRC disregards risk associated with terrorist attacks and hostile actions. (4,16)

**NRC response:** The NRC disagrees with these comments. The licensee's Security Plan must provide high assurance for the physical protection of the SFP. This is the same level of protection that was required during reactor operations. In the cases where EP exemptions are issued, the exemptions eliminate the definition of "hostile action" and its related requirements, but elements for security-based events are maintained. The classification of security-based events, notification of offsite authorities and coordination with offsite agencies under a CEMP approach are still required.

The design basis threat in 10 CFR Part 73 provides reasonable hypothetical threats for radiological sabotage, to which licensees must be able to respond. In order to assure that this threat statement remains a valid basis for the design of physical protection systems, the staff routinely reviews and analyzes a range of intelligence information. Every 12 months the staff assesses the threat environment for that 12-month period and formally provides its conclusions to the Commission in a report. If significant information were received that called into question the adequacy of the design basis threat statements, the staff would immediately notify the Commission. The NRC staff also continuously engages with the U.S. intelligence community so that it can immediately respond to credible threats to licensees. Requirements for identifying anticipated threats, maintaining preparedness to address those threats, protecting onsite workers, and recommending actions to protect surrounding communities are integral to the NRC's regulatory scheme. Licensees must be capable of responding to anticipated threats that include natural phenomena and security events. In the event of a credible threat to the safe and secure operation of the facility, the licensee is required to notify the NRC Operations Center, which is staffed continuously. The NRC staff monitors the situation and the licensee's response to the threat. If conditions warrant, the NRC will activate its Incident Response Center and begin coordinating with other Federal and State agencies.

A description of physical security requirements in 10 CFR Part 73, "Physical Protection of Plants and Materials" was added to Section 3.0 of the ISG.

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7. Commenters stated that the ISG provides unreasonable assurance that “after a certain amount of time, the overall risk of a zirconium fire becomes insignificant. Contrary to the ISG there is no reasonable assurance of an increased probability that the fuel is coolable.” (4, 16)

**NRC Response:** NRC agrees in part and disagrees in part with the comments. The NRC realizes that because of the catastrophic consequences associated with a zirconium fire, the risk of such a fire will never be insignificant. The NRC disagrees with the comment that there is no reasonable assurance of an increased probability that the fuel is coolable. Air cooling and other heat removal mechanisms following loss of cooling water may be sufficient to keep the fuel cool indefinitely or significantly extend the fuel heat up time, particularly for older fuel. Although the staff cannot completely rule out the possibility of a radiological release from a SFP, the probability of a release from a SFP at a decommissioning power reactor decreases with the passage of time due to the drop in decay heat of the fuel stored in the SFP, and the fact that there would be no further additions to the inventory of fresh spent fuel into the SFP, as the plant is no longer operating. More recent analyses have been performed with site-specific information to determine whether a release from a SFP could occur, considering that site’s practice regarding the physical arrangement of the fuel in the spent fuel pool. For example, NUREG-2161 demonstrated that a release is not expected to occur at the operating power reactor site studied for at least 72 hours following a large, beyond design-basis seismic event that occurs more than 60 days after shutdown. In that study, the reference plant SFP contained fuel recently removed from the reactor, which would be more susceptible to a radiological release scenario than would a SFP at a decommissioning power reactor site.

The ISG is not intended to be used by NRC staff to determine the safety parameters necessary to protect public health and safety from the risk of a SFP accident. NRC studies show that fuel that has aged sufficiently can be cooled by air or water spray. The requirement for emergency response capability is not based upon the likelihood of an accident, but rather upon defense-in-depth principles that are part of all NRC regulatory actions. Emergency preparedness is a defense-in-depth measure required to mitigate the consequences of very unlikely accidents, regardless of the probability of those accidents. Defense-in-depth is provided by mitigation procedures that provide cooling and makeup capability to the SFP should there be a loss of SFP water inventory.

Section 4.0 of the ISG was revised to reflect that the risk of a zirconium fire was extremely low but not insignificant.

8. Commenters described the large amount of radioactivity in the SFP and cites studies showing the financial and health costs that would result from a release of that radioactivity. Based on the inventory in SFPs, one commenter stated that “contrary to the ISG, it is absurd to propose that any honest licensee analysis could show that an offsite radiological release is not postulated to exceed the U.S. Environmental Protection Agency (EPA) protective action guides (PAGs) at the Site Boundary.” (4, 16, 24)

**NRC Response:** NRC disagrees with the comments. The NRC acknowledges that SFPs hold a large amount of radioactive material. Based on the complex conditions that would be necessary for a release of radioactive material that could exceed EPA PAGs, the relative ease of performing successful preventative actions should an initiating event occur, and the ability of offsite government agencies to perform mitigating actions using comprehensive emergency preparedness plans the NRC judges that the health and safety of the public will be adequately maintained when licensees are exempted from the EP requirements as presented in the ISG.

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The NRC believes that analyses can be used to show that an offsite release would not exceed EPA PAGs at the exclusion area boundary (EAB).

The draft ISG proposed two criteria for the exemption of EP requirements: (1) the radiological consequences of DBAs would not exceed the limits of the EPA PAGs at the exclusion area boundary; and (2) based on site-specific analysis, the fuel stored in the SFP would not reach the zirconium ignition temperature in fewer than 10 hours with a loss of all cooling. This assumes all heat generated in the fuel goes to increasing the fuel temperature. The staff believes that if 10 hours were available there is reasonable assurance that mitigative actions consistent with plant conditions could be taken, or if necessary, for offsite authorities to employ a CEMP approach to take protective actions, will provide for the health and safety of the public.

No changes were made to the ISG as a result of these comments.

9. Commenters expressed concern that the process presumed in the ISG, the NRC's exemption process, "does not allow meaningful public participation even though the result will result in serious compromise to public safety." One commenter advocates the use of the amendment process instead of the exemption process. (5, 24)

**NRC Response:** The NRC regulations in 10 CFR 50.12, "Specific Exemptions," specify conditions under which licensees can seek exemptions from certain regulatory requirements. In certain situations, licensees can also seek amendments. The engagement process for stakeholders for exemptions and license amendments is outside the scope of this ISG. This ISG provides only technical guidance describing one approach that the NRC staff will use to evaluate an applicant's justifications that accompany a particular exemption request.

No changes were made to the ISG as a result of these comments.

10. One commenter said that the NRC overlooks the possibility of leaking spent fuel storage containers, which is compounded by the additional complexity created by the increasing use of high-burnup fuel. The commenter claimed that high-burnup fuel significantly increases the chance of radiation releases from spent fuel storage. (24)

**NRC Response:** These comments are outside the scope of the ISG. This ISG does not address considerations for dry cask storage systems.

No changes were made to the ISG as a result of these comments.

11. One commenter expressed concern that use of the ISG would reduce safety margins because the NRC seeks to remove emergency planning even though the impact of emergency planning on accident consequences from spent fuel was a significant consideration in NUREG-2161. The commenter claimed that the NRC ignores the possibility that the triggering event for a radiological release could well create a chaotic post-accident environment that would substantially disable a quick and effective response. (20)

**NRC Response:** The NRC disagrees with this comment. The ISG requires licensees to demonstrate that a suitable amount of time is available for mitigating the effects of events which could lead to a radiological release. Licensees are also required to describe multiple strategies to provide make up to the SFP using on-site resources that are within the capabilities of the on-

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site staff. The regulations as exempted in the ISG still require licensees to maintain on-site robust emergency planning to protect public health and safety, and common defense and security at the licensee’s site. The NRC believes that in the unlikely event that offsite action is required, States and local authorities, using a comprehensive emergency planning (all hazards) approach can and will take protective actions to protect the health and safety of the public.

No changes were made to the ISG as a result of these comments.

12. One commenter stated the ISG should clarify whether the Emergency Response Data System’s (ERDS) is applicable to decommissioning sites. (2)

**NRC Response:** The NRC agrees with this comment.

The ISG has been revised to include a statement to clarify the requirements of Section VI “Emergency Response Data System” of Appendix E to 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities.” Under Section VI.2, “all nuclear power facilities that are shut down permanently or indefinitely” are not required to maintain their ERDS. Because decommissioning reactors “are shut down permanently or indefinitely,” they are not required to maintain their ERDS and therefore do not need an exemption from the ERDS requirements.

13. One commenter proposed that the NRC undertake rulemaking to allow for any reduction in emergency preparedness at decommissioning facilities. (24)

**NRC Response:** In the Staff Requirements Memorandum (ADAMS Accession No. ML14364A111) to SECY-14-0118, “Request by Duke Energy Florida, Inc. for Exemptions from Certain Emergency Planning Requirements” (ADAMS Accession No. ML14219444), the Commission provided the following direction to the NRC staff: “The staff should proceed with rulemaking on decommissioning” and “the staff should set an objective of early 2019 for completion of this rulemaking.”

No changes were made to the ISG based on these comments.

Specific (non-editorial) NEI (2) comments on ISG text:

| #   | Page Paragraph                  | Section   | Comment   |
|-----|---------------------------------|-----------|---|
| 14. | Page 3, Paragraph 3, Sentence 2 | 2.0 Scope | <p><b>NEI recommends the following markup of sentence one:</b></p> <p>This guidance is only applicable to a nuclear power <b>plant licensee</b> reactor that has notified the NRC that it has permanently ceased reactor operation in accordance with 10 CFR 50.82(a)(1)(i), has certified permanent removal of fuel from the reactor vessel under 10 CFR 50.82(a)(1)(ii), is storing spent fuel in a spent fuel pool (SFP) and is not located on the site of an operating nuclear power reactor.</p> |

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**NRC Response:** The NRC agrees with the comment because the change would more accurately reflect the entities to which the ISG would apply. The NRC revised the ISG in accordance with the comment.

| #   | Page Paragraph                  | Section        | Comment   |
|-----|---------------------------------|----------------|---|
| 15. | Page 3, Paragraph 4, Sentence 4 | 3.0 Background | NEI recommends the following markup of sentence four:<br>Because of the lower comparative risk from a decommissioning power reactor, licensees typically <b>request</b> <del>make a case for</del> an exemption on the basis that <b>portions</b> <del>the application of</del> the regulation in the particular circumstance <del>decommissioning plant is</del> <b>are</b> not necessary to achieve the underlying purpose of the rule. |

**NRC Response:** The NRC agrees with the comment because the change provides more concise and clear wording. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                 | Section  | Comment  |
|-----|---------------------------------|--|--|
| 16. | Page 7, Paragraph 2, Sentence 2 | 5.0 Evaluation of Exemptions to EP Regulations | <b>NEI recommends removal of sentence two:</b><br>Historically, exemption requests have included analyses of expended resin fires and direct radiation exposure due to a drained SFP |

**NRC Response:** The NRC disagrees with the comment. These are examples of what have been required in the past and provide the reviewer with some history of previous exemptions that were granted to licensees. The sentence was revised to include a list of analyses that have been included in previous exemption requests and that the staff believes can provide additional assurance that the public will be protected should an event occur at a decommissioning site. No changes were made to the ISG based on this comment.

| #   | Page, Paragraph                | Section  | Comment   |
|-----|--------------------------------|--|---|
| 17. | Page 7 Paragraph 4, Sentence 2 | 5.0 Evaluation of Exemptions to EP Regulations | <b>NEI requests additional information or clarification:</b><br>The ISG states: "The staff should ensure that the licensee has addressed these IDCs and SDAs in the final safety analysis report for the decommissioning site if they are storing fuel in the SFP." The ISG should specify what specific information from the IDCs and SDAs are required to be placed in the SAR. |

**NRC Response:** The NRC agrees that the NRC should verify that the licensee addresses the IDCs and SDAs. The NRC does not agree that the information is required to be in the SAR. The intent of this provision in the ISG is to give the reviewer insight into how NUREG-1738 assumptions and conditions relate to the specific licensee. Licensees have provided adequate information concerning IDC and SDAs in the latest exemption requests without the NRC

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specifying what information is required. The staff wants to allow discretion in how the information is presented.

The sentence was revised to read “The staff should ensure that the licensee has addressed these IDCs and SDAs if they are storing fuel in the SFP.”

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| #   | Page, Paragraph               | Section  | Comment  |
|-----|-------------------------------|--|--|
| 18. | Page 7, Following Paragraph 4 | 5.0 Evaluation of Exemptions to EP Regulations | <b>NEI recommends addition of the following sentences after paragraph four:</b><br>“Approval of the 10 CFR 50.47 and Appendix E exemption request allows submittal for NRC approval of the licensee's Permanently Defueled Emergency Plan, licensee's Amendment Request and the licensee's Permanently Defueled EALs. Exemptions from EP requirements may be approved when the specific site analyses show that at least ten hours are available from a point in the partial drain down event where cooling of the spent fuel is not effective until the hottest fuel assembly reaches 900 degrees C.” |

**NRC Response:** The NRC agrees with the comment because the change provides a good description of the need for the requested exemption. The NRC revised the ISG in accordance with the comment with the addition that design basis accidents (DBA) analyses show that any release would not exceed U.S. Environmental Protection Agency (EPA) Protective Action Guides (PAGs) at the exclusion area boundary (EAB).

| #   | Page, Paragraph                             | Section                               | Comment   |
|-----|---|---------------------------------------|---|
| 19. | Page 8, Column 2 Paragraph 1, Last Sentence | Table 1, Exemptions for Consideration | <b>NEI recommends the following markup to the last sentence of the paragraph:</b><br>Because ten hours allows sufficient time to initiate mitigative actions to prevent a zirconium fire in the SFP or to initiate <del>ad-hoc</del> offsite protective actions <b><u>in accordance with an all hazard plan</u></b> , offsite EP <b><u>radiological emergency plans</u></b> are not necessary for these permanently defueled nuclear power plant licensees. |

**NRC Response:** The NRC agrees with this comment. The change more accurately reflects the actual response expected in the event of an emergency at a permanently shutdown and defueled site. The comment was incorporated with “all hazard plans” replaced with “comprehensive emergency management plans” to maintain consistency between the ISG and Safety Evaluation Report for the approved exemption for Kewaunee Power Station.

| #   | Page, Paragraph                                    | Section                               | Comment   |
|-----|--|---------------------------------------|---|
| 20. | Page 8, Column 2 Paragraph 2, Following Sentence 1 | Table 1, Exemptions for Consideration | <b>NEI recommends addition of the following sentence after sentence one:</b><br>Requirement is applicable to the State and the local government in which the nuclear facility is located. State and local government response will be in accordance with each agency's all hazard plans and procedures. |

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**NRC Response:** The NRC agrees with this comment. The change more accurately defines the localities affected by the regulation. The comment was incorporated with “all hazard plans” replaced with “comprehensive emergency management plans” to maintain consistency between the ISG and Safety Evaluation Reports for the approved exemption for Kewaunee Power Station.

| #   | Page, Paragraph                          | Section                               | Comment  |
|-----|--|---------------------------------------|--|
| 21. | Page 9, Column 2 Paragraph 3, Sentence 3 | Table 1, Exemptions for Consideration | <b>NEI recommends the following markup of sentence 3:</b><br>If 10 CFR 50.54(hh)(2) type of mitigation measures are successful, releases could only occur during the first several days after the fuel came <b>is removed from</b> out of the reactor. |

**NRC Response:** The NRC agrees with this comment. Inclusion of the 10 CFR 50.54(hh)(2) example could lead the reviewer to the mistaken belief that the 10 CFR 50.54(hh)(2) requirements are fully applicable. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                     | Section                               | Comment   |
|-----|-------------------------------------|---------------------------------------|---|
| 22. | Page 9, Column 2, After Paragraph 4 | Table 1, Exemptions for Consideration | <b>NEI recommends the following addition after paragraph 4:</b><br>“Requirement is applicable to the State and the local government in which the nuclear power plant is located.” |

**NRC Response:** The NRC agrees with this comment. The change more accurately defines the localities affected by the regulation. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                | Section                               | Comment   |
|-----|--------------------------------|---------------------------------------|---|
| 23. | Page 11, Column 1, Paragraph 2 | Table 1, Exemptions for Consideration | <b>NEI recommends addition of the following exemption:</b><br>10 CFR 50.72(a)(4), Emergency Response Data System (ERDS) |

**NRC Response:** The NRC disagrees with this comment. Under 10 CFR Part 50, appendix E, Section VI.2, ERDS is not required for decommissioning sites, so an exemption from the ERDS requirement is not necessary. The ISG was revised to state that this exemption is not necessary.

| #   | Page, Paragraph                | Section                               | Comment  |
|-----|--------------------------------|---------------------------------------|--|
| 24. | Page 11, Column 2, Paragraph 3 | Table 1, Exemptions for Consideration | <b>NEI recommends addition of the following:</b><br>The regulation refers to “facilities”, but multiple facilities are not required, given that decommissioned NPP maintain one emergency facility, namely the control room. |

**NRC Response:** The NRC disagrees with this comment. Information in column two is intended for NRC staff. There is enough information throughout the document that makes it clear there

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does not need to be more than one facility, whether it is the control room, nuclear island or somewhere else. No changes were made to the ISG based on this comment.

| #   | Page, Paragraph                                  | Section                               | Comment  |
|-----|--|---------------------------------------|--|
| 25. | Page 14, Column 2, Paragraph 2, After Sentence 1 | Table 1, Exemptions for Consideration | <b>NEI recommends the following reference after sentence one:</b><br>...risk of emergency necessitating offsite assistance. (Refer to 10 CFR 50.47(b) Basis for Change |

**NRC Response:** The NRC agrees with this comment. The change reflects a more complete basis for the exemption. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                            | Section                               | Comment  |
|-----|--|---------------------------------------|--|
| 26. | Page 15, Column 2, Paragraph 2, Sentence 1 | Table 1, Exemptions for Consideration | <b>NEI recommends the following reference after sentence 1:</b><br>EALs are to be consistent with Appendix 1 (if applicable) and Appendix C of NEI 99-01, Revision 6, "Methodology for Development of Emergency Action Levels" <b>with the exception that ICs PD-HU1 and PD-HAI are not implemented.</b> |

**NRC Response:** The NRC disagrees with this comment. The NRC staff replaced the paragraph during finalization of the ISG because NEI 99-01, Revision 6 is only one of the EAL schemes endorsed by the NRC. In addition, some security events at decommissioning facilities should warrant declaration of an emergency.

| #   | Page, Paragraph                | Section                               | Comment   |
|-----|--------------------------------|---------------------------------------|---|
| 27. | Page 15, Column 2, Paragraph 3 | Table 1, Exemptions for Consideration | <b>NEI recommends the following addition after paragraph 3:</b><br>"...and 50.47(b)(10)." |

**NRC Response:** The NRC agrees with this comment. The change reflects a more complete basis for the exemption. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                | Section                               | Comment   |
|-----|--------------------------------|---------------------------------------|---|
| 28. | Page 16, Column 2, Paragraph 3 | Table 1, Exemptions for Consideration | <b>NEI recommends the following markup of the third paragraph:</b><br>EALs should <del>to</del> be developed with the guidance provided in NEI 99-01, Revision 6 with the following exception applied to example emergency action level two:<br>2. Dose assessment using actual meteorology indicates doses greater than 10 mrem TEDE or 50 mrem thyroid CDE at <del>or beyond</del> (site-specific dose receptor point). |

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**NRC Response:** The NRC disagrees with this comment. The NRC staff deleted this paragraph from the ISG because NEI 99-01, Revision 6 is not the only EAL scheme endorsed by the NRC. No changes were made to the ISG based on this comment.

| #   | Page, Paragraph                      | Section                               | Comment  |
|-----|--------------------------------------|---------------------------------------|--|
| 29. | Page 16, Column 2, After Paragraph 5 | Table 1, Exemptions for Consideration | <b>NEI recommends the following addition after paragraph five:</b><br><b><u>Requirement is applicable to the State and the local government in which the nuclear power plant is located.</u></b> |

**NRC Response:** The NRC agrees with this comment. The change more accurately defines the localities affected by the regulation. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                            | Section                               | Comment  |
|-----|--|---------------------------------------|--|
| 30. | Page 17, Column 1, Paragraph 3, Sentence 1 | Table 1, Exemptions for Consideration | <b>NEI recommends the following deletion after sentence 1:</b><br><del>Within 15 minutes</del> |

**NRC Response:** The NRC agrees with this comment. The change maintains consistency with SERs for decommissioning sites. The NRC revised the ISG in accordance with the comment. “[*The licensee should provide site-specific justification for exceeding the 15 minute classification time requirement.*]” was added to the basis for the exemption.

| #   | Page, Paragraph               | Section                               | Comment   |
|-----|-------------------------------|---------------------------------------|---|
| 31. | Page 17, Column 2, Sentence 2 | Table 1, Exemptions for Consideration | <b>NEI recommends the following addition of the second sentence:</b><br>A specific notification time should be provided and justified, as part of the exemption request (e.g., a licensee shall have the capability to notify responsible State and local governmental agencies as soon as possible, not to exceed 60 minutes). |

**NRC Response:** The NRC agrees with this comment. The change reflects the information that should be provided by the licensees for this exemption. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                      | Section                               | Comment   |
|-----|--------------------------------------|---------------------------------------|---|
| 32. | Page 17, Column 2, after Paragraph 3 | Table 1, Exemptions for Consideration | <b>NEI recommends the following additional text after paragraph 3:</b><br>The responsible State and local governmental agencies are the agencies whose jurisdictions include the area where the nuclear power plant is located. |

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**NRC Response:** The NRC agrees with this comment. The change more accurately defines the localities affected by the regulation. The NRC revised the ISG in accordance with the comment

| #   | Page, Paragraph                      | Section                               | Comment   |
|-----|--------------------------------------|---------------------------------------|---|
| 33. | Page 18, Column 2, after Paragraph 2 | Table 1, Exemptions for Consideration | <b>NEI recommends the following addition after paragraph 2:</b><br>See basis for 50.47(b)(3). |

**NRC Response:** The NRC agrees with this comment. The change reflects a more complete basis for the exemption. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                      | Section                               | Comment   |
|-----|--------------------------------------|---------------------------------------|---|
| 34. | Page 19, Column 2, after Paragraph 1 | Table 1, Exemptions for Consideration | <b>NEI recommends the following addition after paragraph 2:</b><br>See basis for 50.47(b)(3). |

**NRC Response:** The NRC agrees with this comment. The change reflects a more complete basis for the exemption. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph    | Section                               | Comment  |
|-----|--------------------|---------------------------------------|--|
| 35. | Page 19, Column 2, | Table 1, Exemptions for Consideration | <b>NEI recommends the following addition to the basis:</b><br>Since the probability of a large offsite radiological release at a decommissioning power reactor storing irradiated fuel in the SFP is lower than the risk of a large offsite radiological release from an operating power reactor and its SFP, offsite agency response will not be required at an emergency operations facility (EOF) and joint information center (JIC). This is based on the consideration of initiating reactor events associated with normal and abnormal operations, design-basis accidents, and certain beyond design basis accidents applicable to a decommissioning site due to the reduced staff and the minimal expected offsite response required. |

**NRC Response:** The NRC does not agree with this comment. This regulation does not mention a JIC. This paragraph was also reworded as a result of NRC staff review. No changes were made to the ISG based on this comment.

| # | Page, Paragraph | Section | Comment |
|---|-----------------|---------|---------|
|---|-----------------|---------|---------|

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|-----|---|--|--|
| 36. | Page 20,<br>Column 2,<br>Paragraph 1,<br>Sentence 1 | Table 1,<br>Exemptions<br>for<br>Consideration | <b>NEI recommends the following markup of sentence 1:</b><br>See basis for <del>50.47(b)(3)</del> <b><u>IV.E.8.a(i)</u></b><br>. |
|-----|---|--|--|

**NRC Response:** The NRC agrees and disagrees with this comment. The NRC agrees that there is a more appropriate basis for this exemption than the basis for an exemption from 10 CFR 50.47(b)(3). The basis for exemption from Section IV.E.8.c is more applicable to the requested exemption. The NRC revised the ISG to refer to the basis for exemption from Section IV.E.8.c.

| #   | Page,<br>Paragraph                            | Section  | Comment   |
|-----|---|--|---|
| 37. | Page 21,<br>Column 2,<br>After<br>Paragraph 8 | Table 1,<br>Exemptions<br>for<br>Consideration | <b>NEI recommends the following addition of text after paragraph eight:</b><br>Local news media personnel no longer need radiological orientation training since they will not be called upon to respond to a radiological event. The term "Civil Defense" is no longer commonly used; references to this term in the examples provided in the regulation are therefore not needed. |

**NRC Response:** The NRC agrees and disagrees with this comment. The NRC disagrees with the change as proposed concerning local news media. The NRC changed the statement to read: "Local news media personnel no longer need radiological orientation training since they will not be called upon to support the formal Joint Information Center" because that sentence more accurately describes the expected role change of the local news media personnel. The NRC revised the ISG in accordance with the comment concerning the term "Civil Defense."

| #   | Page,<br>Paragraph                            | Section  | Comment  |
|-----|---|--|--|
| 38. | Page 22,<br>Column 2,<br>After<br>Paragraph 1 | Table 1,<br>Exemptions<br>for<br>Consideration | <b>NEI recommends the following addition of paragraph 1:</b><br>...and therefore requires no testing of offsite emergency preparedness in a full participation exercise. |

**NRC Response:** The NRC agrees with this comment. The change more accurately relates the basis to the exempted regulation language. The NRC revised the ISG in accordance with the comment.

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| #   | Page, Paragraph                               | Section                               | Comment   |
|-----|---|---------------------------------------|---|
| 39. | Page 23, Column 1, Paragraph 1, Last Sentence | Table 1, Exemptions for Consideration | <b>NEI recommends the following markup of the last sentence:</b><br>...the drills may focus on the onsite <del>exercise</del> training objectives |

**NRC Response:** The NRC disagrees with this comment. Exercises are still required for licensees with decommissioning plants. Although this paragraph relates to drills, drills should still support exercise training objectives. No changes were made to the ISG based on this comment.

| #   | Page, Paragraph                | Section                               | Comment  |
|-----|--------------------------------|---------------------------------------|--|
| 40. | Page 23, Column 2, Paragraph 4 | Table 1, Exemptions for Consideration | <b>NEI recommends the following addition to paragraph 4:</b><br>See basis for Sections <b><u>IV.1 and</u></b> IV.F.2a. |

**NRC Response:** The NRC agrees with this comment. The change reflects a more complete basis for the exemption. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                      | Section                               | Comment   |
|-----|--------------------------------------|---------------------------------------|---|
| 41. | Page 24, Column 2, After Paragraph 3 | Table 1, Exemptions for Consideration | <b>NEI recommends the following addition after paragraph 3:</b><br>The responsible State and local governmental agencies are the agencies whose jurisdictions include where the nuclear power plant is located. |

**NRC Response:** The NRC agrees with this comment. The change more accurately defines the localities affected by the regulation. The NRC revised the ISG in accordance with the comment.

| #   | Page, Paragraph                                    | Section                               | Comment  |
|-----|--|---------------------------------------|--|
| 42. | Page 26, Column 1, First Paragraph, First Sentence | Table 1, Exemptions for Consideration | <b>NEI recommends the following change to the first sentence:</b><br>The word “justification” should be struck as the rest of the text has been. |

**NRC Response:** The NRC agrees with this comment. The change corrects a typographical error. The NRC revised the ISG in accordance with the comment.

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| #   | Page,<br>Paragraph                   | Section  | Comment  |
|-----|--------------------------------------|--|--|
| 43. | Page 26,<br>Column 2,<br>Paragraph 1 | Table 1,<br>Exemptions<br>for<br>Consideration | <b>NEI recommends the following change to paragraph one:</b><br>See basis for Section IV.E.d.1 |

**NRC Response:** The NRC agrees with this comment. The change corrects a typographical error. The NRC revised the ISG in accordance with the comment.

44. NEI submitted 35 comments and several markups associated with Attachment 1, Guidance for Evaluation of Decommissioned Emergency Plans.

**NRC Response:** All comments were reviewed and considered as part of revision to Attachment 1, which has been replaced in its entirety. Guidance for staff reviewers of PDEPs has been developed from NUREG-0654/FEMA-REP-1 (Revision 1) evaluation criteria applicable to permanently defueled reactor sites without a co-located operating nuclear power reactor.

**Table 1**  
**List of Commenters**

| <b>Accession Number</b> | <b>Commenter ID</b> | <b>Source</b>       | <b>Affiliation</b>  |
|-------------------------|---------------------|---------------------|---|
| ML14107A010             | 3                   | Sue Perkins-Grew    | Nuclear Energy Institute  |
| ML14107A011             | 4                   | Paul Gunter         | Beyond Nuclear  |
| ML14107A012             | 5                   | Budd Haas           | VT resident   |
| ML14107A013             | 6                   | Rupa Cousins        | None given  |
| ML14107A014             | 7                   | Patricia Cavanaugh  | VT Resident   |
| ML14107A015             | 8                   | William Maurer      | MA Resident   |
| ML14107A016             | 9                   | Christine Copeland  | MA Resident   |
| ML14107A017             | 10                  | L Amyot             | None given  |
| ML14107A018             | 11                  | "Michael" Anonymous | None given  |
| ML14107A019             | 12                  | Ulrike von Moltke   | None given  |
| ML14107A020             | 13                  | Glen Ayers          | Franklin Regional Council of Governments  |
| ML14107A021             | 14                  | Kate Tarlow Morgan  | None given  |
| ML14107A022             | 15                  | Janet Azarovitz     | Cape Cod Resident   |
| ML14107A023             | 17                  | Susan Watson        | MA resident   |
| ML14107A024             | 18                  | David Agnew         | MA Resident   |
| ML14079A020             | 2                   | Erica Gray          | VA Resident   |
| ML14107A069             | 16                  | Mary Lampert        | Pilgrim Watch   |
| ML14113A424             | 24                  | Christopher Recchia | Vermont Department of Public Safety Division of Emergency Management and Homeland Security            |
| ML14113A374             | 20                  | Lawrence Crist      | American Red Cross Vermont & New Hampshire Upper Valley Region  |
| ML14113A375             | 21                  | Eugen Bernhard      | VT Resident   |
| ML14113A423             | 22                  | Heather Lightner    | Concerned Neighbors of Pilgrim Opposing Emergency Planning Exemption Request for Decommissioning NPPs |
| ML14113A492             | 23                  | Ed Anthes           | VT Resident   |