**[7590-01-P]**

## NUCLEAR REGULATORY COMMISSION

**[Docket Nos. 50-206, 50-361, 50-362, and 72-41; NRC-2015-0093]**

**Southern California Edison Company**

**San Onofre Nuclear Generating Station, Units 1, 2, and 3, and**

**Independent Spent Fuel Storage Installation**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Exemption; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is granting exemptions in response to a request from Southern California Edison Company (SCE or the licensee) regarding certain emergency planning (EP) requirements. The exemptions will eliminate the requirements to maintain formal offsite radiological emergency plans and reduce the scope of the onsite EP activities at the San Onofre Nuclear Generating Station (SONGS), Units 1, 2, and 3, and the Independent Spent Fuel Storage Installation (ISFSI), based on the reduced risks of accidents that could result in an offsite radiological release at the decommissioning nuclear power reactors. Provisions would still exist for offsite agencies to take protective actions, using a comprehensive emergency management plan to protect public health and safety, if protective actions were needed in the event of a very unlikely accident that could challenge the safe storage of spent fuel.

**ADDRESSES:** Please refer to Docket ID **NRC-2015-0093** when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to http://www.regulations.gov and search for Docket ID **NRC-2015-0093**. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.
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- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

**FOR FURTHER INFORMATION CONTACT:** Thomas Wengert, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-4037; e-mail: Thomas.Wengert@nrc.gov.

**SUPPLEMENTARY INFORMATION:**

## I. Background.

The SONGS Units 1, 2, and 3, are decommissioning power reactors located in San Diego County, California. The licensee, SCE, is the holder of SONGS Facility Operating License Nos. DPR-13, NPF-10, and NPF-15. The licenses provide, among other things, that the facility is subject to all rules, regulations, and orders of the NRC now or hereafter in effect.

SONGS Unit 1 was permanently shut down in 1993. On June 12, 2013 (ADAMS Accession No. ML131640201), the licensee provided the certifications that SONGS Units 2 and 3, had permanently ceased power operations. On June 28 (ADAMS Accession No. ML13183A391), and July 22, 2013 (ADAMS Accession No. ML13204A304), the licensee provided certifications that all fuel had been permanently removed from the SONGS Units 3 and 2, reactors, respectively. As a permanently shutdown and defueled facility, and pursuant to section 50.82(a)(2) of Title 10 of the *Code of Federal Regulations* (10 CFR), SCE is no longer authorized to operate the reactors or emplace fuel into the reactor vessels, but is still authorized to possess and store irradiated nuclear fuel. Irradiated fuel is currently stored onsite at SONGS in spent fuel pools (SFPs) and in the ISFSI dry casks.

During normal power reactor operations, the forced flow of water through the reactor coolant system (RCS) removes heat generated by the reactor. The RCS, operating at high temperatures and pressures, transfers this heat through the steam generator tubes converting non-radioactive feedwater to steam, which then flows to the main turbine generator to produce electricity. Many of the accident scenarios postulated in the updated safety analysis reports (USARs) for operating power reactors involve failures or malfunctions of systems that could affect the fuel in the reactor core, which in the most severe postulated accidents, would involve the release of some fission products into the environment. With the permanent cessation of

reactor operations at SONGS and the permanent removal of the fuel from the reactor vessels, such accidents are no longer possible. The reactors, RCS, and supporting systems are no longer in operation and have no function related to the storage of the irradiated fuel. Therefore, postulated accidents involving failure or malfunction of the reactors, RCS, or supporting systems are no longer applicable.

The EP requirements of 10 CFR 50.47, "Emergency plans," and appendix E to 10 CFR part 50, "Emergency Planning and Preparedness for Production and Utilization Facilities," continue to apply to nuclear power reactors that have permanently ceased operation and have removed all fuel from the reactor vessel. There are no explicit regulatory provisions distinguishing EP requirements for a power reactor that is permanently shut down and defueled from those for a reactor that is authorized to operate. To reduce or eliminate EP requirements that are no longer necessary due to the decommissioning status of the facility, SCE must obtain exemptions from those EP regulations. Only then can SCE modify the SONGS emergency plan to reflect the reduced risk associated with the permanently shutdown and defueled condition of SONGS .

## II. Request/Action.

By letter dated March 31, 2014 (ADAMS Accession No. ML14092A332), "Emergency Planning Exemption Request," SCE requested exemptions from certain EP requirements of 10 CFR part 50 for SONGS. More specifically, SCE requested exemptions from certain planning standards in 10 CFR 50.47(b) regarding onsite and offsite radiological emergency plans for nuclear power reactors; from certain requirements in 10 CFR 50.47(c)(2) that require establishment of plume exposure and ingestion pathway emergency planning zones for nuclear power reactors; and from certain requirements in 10 CFR part 50, appendix E, Section IV, which

establishes the elements that make up the content of emergency plans. In letters dated September 9, October 2, October 7, October 27, November 3, and December 15, 2014 (ADAMS Accession Nos. ML14258A003, ML14280A265, ML14287A228, ML14303A257, ML14309A195, and ML14351A078, respectively), SCE provided responses to the NRC staff's requests for additional information (RAI) concerning the proposed exemptions. In addition, SCE submitted a letter dated October 6, 2014, which contains security-related information, and is therefore withheld from public disclosure. The December 15, 2014, letter is a redacted, publicly-available version of this letter.

The information provided by SCE included justifications for each exemption requested. The exemptions requested by SCE would eliminate the requirements to maintain formal offsite radiological emergency plans, reviewed by the Federal Emergency Management Agency (FEMA) under the requirements of 44 CFR part 350, and reduce the scope of onsite EP activities. The SCE stated that application of all of the standards and requirements in 10 CFR 50.47(b), 10 CFR 50.47(c), and 10 CFR part 50, appendix E is not needed for adequate emergency response capability, based on the substantially lower onsite and offsite radiological consequences of accidents still possible at the permanently shutdown and defueled facility as compared to an operating facility. If offsite protective actions were needed for a very unlikely accident that could challenge the safe storage of spent fuel at SONGS, provisions exist for offsite agencies to take protective actions using a comprehensive emergency management plan (CEMP) under the National Preparedness System to protect the health and safety of the public. A CEMP in this context, also referred to as an emergency operations plan (EOP), is addressed in FEMA's Comprehensive Preparedness Guide 101, "Developing and Maintaining Emergency Operations Plans." Comprehensive Preparedness Guide 101 is the foundation for State, territorial, Tribal, and local EP in the United States. It promotes a common understanding of the fundamentals of risk-informed planning and decision-making and helps planners at all levels of

government in their efforts to develop and maintain viable, all-hazards, all-threats emergency plans. An EOP is flexible enough for use in all emergencies. It describes how people and property will be protected; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies and other resources available; and outlines how all actions will be coordinated. A CEMP is often referred to as a synonym for "all-hazards planning."

## III. Discussion.

In accordance with 10 CFR 50.12, "Specific exemptions," the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 50 when: (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) any of the special circumstances listed in 10 CFR 50.12(a)(2) are present. These special circumstances include, among other things, that the application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.

As noted previously, the current EP regulations contained in 10 CFR 50.47(b) and appendix E to 10 CFR part 50 apply to both operating and shutdown power reactors. The NRC has consistently acknowledged that the risk of an offsite radiological release at a power reactor that has permanently ceased operations and removed fuel from the reactor vessel is significantly lower, and the types of possible accidents are significantly fewer, than at an operating power reactor. However, current EP regulations do not recognize that once a power reactor permanently ceases operation, the risk of a large radiological release from a credible emergency accident scenario is reduced. The reduced risk is largely the result of the low

frequency of credible events that could challenge the SFP structure, and the reduced decay heat and reduced short-lived radionuclide inventory due to decay. The NRC's NUREG/CR-6451, "A Safety and Regulatory Assessment of Generic BWR and PWR Permanently Shutdown Nuclear Power Plants," dated August 31, 1997 (ADAMS Accession No. ML082260098) and NUREG-1738, "Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants," dated February 28, 2001 (ADAMS Accession No. ML010430066), confirmed that for permanently shutdown and defueled power reactors bounded by the assumptions and conditions in the reports, the risk of offsite radiological release is significantly less than that for an operating power reactor.

In the past, EP exemptions similar to those requested by SCE, have been granted to licensees of permanently shutdown and defueled power reactors. However, the exemptions did not relieve the licensees of all EP requirements. Rather, the exemptions allowed the licensees to modify their emergency plans commensurate with the credible site-specific risks that were consistent with a permanently shutdown and defueled status. Specifically, for previous permanently shutdown and defueled power reactors, the basis for the NRC staff's approval of the exemptions from certain EP requirements was based on the licensee's demonstration that: (1) the radiological consequences of design-basis accidents would not exceed the limits of the U.S. Environmental Protection Agency's (EPA) Protective Action Guidelines (PAGs) at the exclusion area boundary, and (2) in the unlikely event of a beyond-design-basis accident resulting in a loss of all modes of heat transfer from the fuel stored in the SFP, there is sufficient time to initiate appropriate mitigating actions, and if needed, for offsite authorities to implement offsite protective actions using a CEMP approach to protect the health and safety of the public. Based on precedent exemptions, the site-specific analysis should show that there is sufficient time following a loss of SFP coolant inventory until the onset of fuel damage to implement onsite mitigation of the loss of SFP coolant inventory and if necessary, to implement offsite protective

actions. To meet this criterion, the staff accepted in precedent exemptions that the time should exceed 10 hours from the loss of coolant until the fuel temperature reaches 900 degrees Celsius (°C), assuming no air cooling.

The NRC staff reviewed the licensee's justification for the requested exemptions against the criteria in 10 CFR 50.12(a) and determined, as described below, that the criteria in 10 CFR 50.12(a) are met, and that the exemptions should be granted. An assessment of the SCE EP exemptions is described in SECY-14-0144, "Request by Southern California Edison for Exemptions from Certain Emergency Planning," dated December 17, 2014 (ADAMS Accession No. ML14251A554). The Commission approved the NRC staff's recommendation to grant the exemptions in the staff requirements memorandum to SECY-14-0144, dated March 2, 2015 (ADAMS Accession No. ML15061A521). Descriptions of the specific exemptions requested by SCE and the NRC staff's basis for granting each exemption are provided in SECY-14-0144 and summarized in a table at the end of this document. The staff's detailed review and technical basis for the approval of the specific EP exemptions, requested by SCE, are provided in the NRC staff's safety evaluation dated June 4, 2015 (ADAMS Accession No. ML15082A204).

**A. <u>Authorized by Law</u>**

The licensee has proposed exemptions from certain EP requirements in 10 CFR 50.47(b), 10 CFR 50.47(c)(2), and 10 CFR part 50, appendix E, Section IV, which would allow SCE to revise the SONGS Emergency Plan to reflect the permanently shutdown and defueled condition of the station. As stated above, in accordance with 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 50. The NRC staff has determined that granting of the licensee's proposed exemptions will not result in a violation of the Atomic Energy

Act of 1954, as amended, or the NRC's regulations. Therefore, the exemptions are authorized by law.

**B. No Undue Risk to Public Health and Safety**

As stated previously, SCE provided analyses that show the radiological consequences of design-basis accidents will not exceed the limits of the EPA PAGs at the exclusion area boundary. Therefore, formal offsite radiological emergency plans required under 10 CFR part 50 are no longer needed for protection of the public beyond the exclusion area boundary, based on the radiological consequences of design-basis accidents still possible at SONGS.

Although very unlikely, there is one postulated beyond-design-basis accident that might result in significant offsite radiological releases. However, NUREG-1738 confirms that the risk of beyond-design-basis accidents is greatly reduced at permanently shutdown and defueled reactors. The NRC staff's analyses in NUREG-1738 concludes that the event sequences important to risk at permanently shutdown and defueled power reactors are limited to large earthquakes and cask drop events. For EP assessments, this is an important difference relative to operating power reactors, where typically a large number of different sequences make significant contributions to risk. Per NUREG-1738, relaxation of offsite EP requirements, under 10 CFR part 50, a few months after shutdown resulted in only a small change in risk. The report further concludes that the change in risk due to relaxation of offsite EP requirements is small because the overall risk is low, and because even under current EP requirements for operating power reactors, EP was judged to have marginal impact on evacuation effectiveness in the severe earthquakes that dominate SFP risk. All other sequences including cask drops (for which offsite radiological emergency plans are expected to be more effective) are too low in likelihood to have a significant impact on risk.

Therefore, granting exemptions to eliminate the requirements of 10 CFR part 50 to maintain offsite radiological emergency plans and to reduce the scope of onsite EP activities will not present an undue risk to the public health and safety.

**C. Consistent with the Common Defense and Security**

The requested exemptions by SCE only involve EP requirements under 10 CFR part 50 and will allow SCE to revise the SONGS Emergency Plan to reflect the permanently shutdown and defueled condition of the facility. Physical security measures at SONGS are not affected by the requested EP exemptions. The discontinuation of formal offsite radiological emergency plans and the reduction in scope of the onsite EP activities at SONGS will not adversely affect SCE's ability to physically secure the site or protect special nuclear material. Therefore, the proposed exemptions are consistent with the common defense and security.

**D. Special Circumstances**

Special circumstances, in accordance with 10 CFR 50.12(a)(2)(ii), are present whenever application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule. The underlying purposes of 10 CFR 50.47(b), 10 CFR 50.47(c)(2), and 10 CFR part 50, appendix E, Section IV, are to provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, to establish plume exposure and ingestion pathway emergency planning zones for nuclear power plants, and to ensure that licensees maintain effective offsite and onsite radiological emergency plans. The standards and requirements in these regulations were developed by considering the risks associated with operation of a power reactor at its licensed full-power level. These risks include the potential for a reactor accident with offsite radiological dose consequences.

As discussed previously in Section III of this document, because SONGS Units 1, 2, and 3 are permanently shutdown and defueled, there is no longer a risk of offsite radiological release from a design-basis accident and the risk of a significant offsite radiological release from a beyond-design-basis accident is greatly reduced when compared to the risk at an operating power reactor. In a letter dated March 31, 2014 (ADAMS Accession No. ML14092A332), the licensee provided analyses to demonstrate that the radiological consequences of design-basis accidents at SONGS will not exceed the limits of the EPA PAGs at the exclusion area boundary. The NRC staff has confirmed the reduced risks at SONGS by comparing the generic risk assumptions in the analyses in NUREG-1738 to site-specific conditions at SONGS; and has determined that the risk values in NUREG-1738 bound the risks presented by SONGS. In addition, the significant decay of short-lived radionuclides that has occurred since the January 2012 shutdown provides assurance in other ways. As indicated by the results of research conducted for NUREG-1738 and more recently, for NUREG-2161, "Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor" (ADAMS Accession No. ML15255A365), while other consequences can be extensive, accidents from SFPs with significant decay time have little potential to cause offsite early fatalities, even if the formal offsite radiological EP requirements were relaxed. The SCE's analysis of a beyond-design-basis accident involving a complete loss of SFP water inventory, where adequate fuel handling building air exchange with the environment and air cooling of the stored fuel is available, shows that by August 31, 2014, air cooling of the spent fuel assemblies was sufficient to keep the fuel within a safe temperature range, indefinitely, without fuel cladding damage or offsite radiological release.

The only analyzed beyond-design-basis accident scenario that progresses to a condition where a significant offsite release might occur, involves the very unlikely event where the SFP drains in such a way that all modes of cooling or heat transfer are assumed to be unavailable,

which is postulated to result in an adiabatic heatup of the spent fuel. The SCE's analysis of this beyond-design-basis accident shows that as of October 12, 2014, more than 17 hours would be available between the time the fuel is initially uncovered (at which time adiabatic heatup is conservatively assumed to begin), until the fuel cladding reaches a temperature of 1652 degrees Fahrenheit (°F) (900 ºC), which is the temperature associated with rapid cladding oxidation and the potential for a significant radiological release. This analysis conservatively does not include the period of time from the initiating event causing a loss of SFP water inventory until all cooling means are lost.

The NRC staff has verified SCE's analyses and its calculations. The analyses provide reasonable assurance that in granting the requested exemptions to SCE, there is no design-basis accident that will result in an offsite radiological release exceeding the EPA PAGs at the exclusion area boundary. In the unlikely event of a beyond-design-basis accident affecting the SFP that results in a complete loss of heat removal via all modes of heat transfer, there will be well over 10 hours available before an offsite release might occur and, therefore, at least 10 hours to initiate appropriate mitigating actions to restore a means of heat removal to the spent fuel. If a radiological release were projected to occur under this unlikely scenario, a minimum of 10 hours is considered sufficient time for offsite authorities to implement protective actions using a CEMP approach to protect the health and safety of the public.

Exemptions from the offsite EP requirements in 10 CFR part 50 have previously been approved by the NRC when the site-specific analyses show that at least 10 hours are available following a loss of SFP coolant inventory accident with no air cooling (or other methods of removing decay heat) until cladding of the hottest fuel assembly reaches the zirconium rapid oxidation temperature. The NRC staff concluded in its previously granted exemptions, as it does with the SCE-requested EP exemptions, that if a minimum of 10 hours are available to initiate mitigative actions consistent with plant conditions, or if needed, for offsite authorities to

implement protective actions using a CEMP approach, then formal offsite radiological emergency plans, required under 10 CFR part 50, are not necessary at permanently shutdown and defueled power reactors.

Additionally, in its letters to the NRC dated October 6, 2014, and December 15, 2014, SCE described the SFP makeup strategies that could be used in the event of a catastrophic loss of SFP inventory. The multiple strategies for providing makeup water to the SFP include: using existing plant systems for inventory makeup; an internal strategy that relies on installed fire water pumps and service water or fire water storage tanks; or an external strategy that uses portable pumps to initiate makeup flow into the SFPs through a seismic standpipe and standard fire hoses routed to the SFPs or to a spray nozzle. These strategies will continue to be required as a license condition. Considering the very low probability of beyond-design-basis accidents affecting the SFP, these diverse strategies provide defense-in-depth and time to provide additional makeup or spray water to the SFP before the onset of any postulated offsite radiological release.

For all the reasons stated above, the NRC staff concludes that application of certain requirements in 10 CFR 50.47(b), 10 CFR 50.47(c)(2), and 10 CFR part 50, appendix E, as summarized in the table at the end of this document, is not necessary to achieve the underlying purpose of these regulations and, therefore, satisfies the special circumstances in 10 CFR 50.12(a)(2)(ii). The staff further concludes that the exemptions granted by this action will maintain an acceptable level of emergency preparedness at SONGS and provide reasonable assurance that adequate offsite protective measures, if needed, can and will be taken by State and local government agencies using a CEMP approach, in the unlikely event of a radiological emergency at the SONGS facility. Since the underlying purposes of the rules, as exempted, would continue to be achieved, even with the elimination of the requirements under 10 CFR part 50 to maintain formal offsite radiological emergency plans and the reduction in the

scope of the onsite EP activities at SONGS, the special circumstances required by 10 CFR 50.12(a)(2)(ii) exist.

## E. Environmental Considerations

In accordance with 10 CFR 51.31(a), the Commission has determined that the granting of these exemptions will not have a significant effect on the quality of the human environment, as discussed in the NRC staff's Environmental Assessment and Finding of No Significant Impact published on April 17, 2015 (80 FR 21271).

## IV. Conclusions.

Accordingly, the Commission has determined, pursuant to 10 CFR 50.12(a), that SCE's request for exemptions from certain EP requirements in 10 CFR 50.47(b), 10 CFR 50.47(c)(2), and 10 CFR part 50, appendix E, Section IV, and as summarized in the table at the end of this document, are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. Also, special circumstances are present. Therefore, the Commission hereby grants SCE exemptions from certain EP requirements of 10 CFR 50.47(b), 10 CFR 50.47(c)(2), and 10 CFR part 50, appendix E, Section IV, as discussed and evaluated in detail in the staff's safety evaluation dated June 4, 2015. The exemptions are effective as of June 4, 2015.

Dated at Rockville, Maryland, this 4th day of June, 2015.

For the Nuclear Regulatory Commission.

A. Louise Lund, Acting Director,
Division of Operating Reactor Licensing,
Office of Nuclear Reactor Regulation.

**Table of Exemptions Granted to Southern California Edison (SCE)**

| 10 CFR 50.47 | NRC Staff Basis for Exemption |
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| 10 CFR 50.47(b).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require offsite emergency response plans. | In the Statement of Considerations (SOC) for the final rule for emergency planning (EP) requirements for independent spent fuel storage installations (ISFSIs) and for monitor retrievable storage (MRS) facilities (60 FR 32430; June 22, 1995), the Commission responded to comments concerning offsite EP for ISFSIs or an MRS and concluded that, "the offsite consequences of potential accidents at an ISFSI or an MRS would not warrant establishing Emergency Planning Zones."<br><br>In a nuclear power reactor's permanently defueled state, the accident risks are more similar to an ISFSI or an MRS than an operating nuclear power plant. The EP program would be similar to that required for an ISFSI under Section 72.32(a) of 10 CFR when fuel stored in the spent fuel pool (SFP) has more than 5 years of decay time and would not change substantially when all the fuel is transferred from the SFP to an onsite ISFSI. Exemptions from offsite EP requirements have previously been approved when the site-specific analyses show that at least 10 hours is available from a partial drain-down event where cooling of the spent fuel is not effective until the hottest fuel assembly reaches the zirconium ignition temperature of 900 degrees Celsius (°C). The technical basis that underlies the approval of the exemption request is based partly on the analysis of a time period in which spent fuel stored in the SFP is unlikely to reach the zirconium ignition temperature in less than 10 hours. This time period is based on a heat-up calculation which uses several simplifying assumptions. Some of these assumptions are conservative (adiabatic conditions), while others are non-conservative (no oxidation below 900°C). Weighing the conservatisms and non-conservatisms, the staff judges that this calculation reasonably represents conditions that may occur in the event of an SFP accident. |

| 10 CFR 50.47 | NRC Staff Basis for Exemption |
|---|---|
| | The staff concluded that if 10 hours were available to initiate mitigative actions, or if needed, offsite protective actions using a comprehensive emergency management plan (CEMP), formal offsite radiological emergency plans are not necessary for these permanently defueled nuclear power reactor licensees.<br><br>As supported by the licensee's SFP analysis, the staff believes an exemption from the requirements for formal offsite radiological emergency plans is justified for a zirconium fire scenario considering the low likelihood of this event together with time available to take mitigative or protective actions between the initiating event and before the onset of a postulated fire.<br><br>The SCE analysis has demonstrated that the radiological consequences of design-basis-accidents (DBAs) will not exceed the limits of the U.S. Environmental Protection Agency's (EPA's) Protective Action Guides (PAGs) at the exclusion area boundary. These analyses also show that as of October 12, 2014, in the unlikely event of a beyond DBA where the hottest fuel assembly adiabatic heat-up occurs, 17.8 hours is available to take mitigative or, if needed, offsite protective actions using a CEMP from the time the fuel is uncovered until it reaches the auto-ignition temperature of 900°C.<br><br>SCE furnished information to supplement its exemption request concerning its SFP inventory makeup strategies. The multiple strategies for providing makeup to the SFP include: using existing plant systems for inventory makeup; an internal strategy that relies on installed fire water pumps (two motor-driven and one diesel-driven) and service and firewater storage tanks; or an external strategy that uses portable pumps to initiate make-up flow into the pools through a seismic standpipe and standard fire water hoses routed either over the pools' edges or to spray nozzles. SCE further provides that designated on-shift staff is trained to |

| 10 CFR 50.47 | NRC Staff Basis for Exemption |
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| | implement such strategies and they have plans in place to mitigate the consequences of an event involving a catastrophic loss-of-water inventory concurrently from both San Onofre Nuclear Generating Station (SONGS), Units 2 and 3 SFPs. It is estimated that it would take approximately 55 minutes to deliver flow to one pool, with an additional 35 minutes to provide water to the second pool without having to relocate the trailer-mounted pump. Relocation of the trailer-mounted pump, if required, would take approximately 30 additional minutes. The SCE will maintain its Mitigating Strategies License Conditions for Units 2 and 3 (2.C(26) for Unit 2 and 2.C(27) for Unit 3). These license conditions require SONGS to maintain its SFP inventory makeup strategies as discussed above. |
| 10 CFR 50.47(b)(1).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the need for Emergency Planning Zones (EPZs). | Refer to basis for 10 CFR 50.47(b). |
| 10 CFR 50.47(b)(3).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the need for an emergency operations facility (EOF). | Decommissioning power reactors present a low likelihood of any credible accident resulting in a radiological release together with the time available to take mitigative or, if needed, offsite protective actions using a CEMP between the initiating event and before the onset of a postulated fire. As such, an EOF would not be required. The “nuclear island,” control room, or other onsite location can provide for the communication and coordination with offsite organizations for the level of support required.<br><br>Also refer to basis for 10 CFR 50.47(b). |

| 10 CFR 50.47 | NRC Staff Basis for Exemption |
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| 10 CFR 50.47(b)(4).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require reference to formal offsite radiological emergency response plans. | Decommissioning power reactors present a low likelihood of any credible accident resulting in a radiological release together with the time available to take mitigative or, if needed, offsite protective actions using a CEMP between the initiating event and before the onset of a postulated fire. As such, formal offsite radiological emergency response plans are not required.<br><br>The Nuclear Energy Institute (NEI) document NEI 99-01, "Development of Emergency Action Levels for Non-Passive Reactors" (Revision 6), was found to be an acceptable method for development of emergency action levels (EALs) and was endorsed by the NRC in a letter dated March 28, 2013 (ADAMS Accession No. ML12346A463). NEI 99-01 provides EALs for non-passive operating nuclear power reactors, permanently defueled reactors and ISFSIs.<br><br>The SCE requested a license amendment to revise its EAL scheme to NEI 99-01, Revision 6 in a letter dated March 31, 2014, "Permanently Defueled Emergency Action Level Scheme, San Onofre Nuclear Generating Station, Units 1, 2, and 3, Respectively, and Independent Spent Fuel Storage Installation" (ADAMS Accession No. ML14092A249).<br><br>Also refer to basis for 10 CFR 50.47(b). |
| 10 CFR 50.47(b)(5).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require early notification of the public and a means to provide instructions to the public within the plume exposure pathway EPZ. | Refer to basis for 10 CFR 50.47(b). |
| 10 CFR 50.47(b)(6).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require prompt communications with the public. | Refer to basis for 10 CFR 50.47(b). |

| 10 CFR 50.47 | NRC Staff Basis for Exemption |
|---|---|
| 10 CFR 50.47(b)(7).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require information to be made available to the public on a periodic basis about how they will be notified and what their initial protective actions should be. | Refer to basis for 10 CFR 50.47(b). |
| 10 CFR 50.47(b)(9).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the capability for monitoring offsite consequences. | Refer to basis for 10 CFR 50.47(b). |
| 10 CFR 50.47(b)(10)<br><br>The NRC is granting exemption from portions of the rule language that would reduce the range of protective actions developed for emergency workers and the public. Consideration of evacuation, sheltering, or the use of potassium iodide will no longer be necessary. Evacuation time estimates (ETEs) will no longer need to be developed or updated. Protective actions for the ingestion exposure pathway EPZ will not need to be developed. | In the unlikely event of an SFP accident, the iodine isotopes, which contribute to an offsite dose from an operating reactor accident, are not present, so potassium iodide distribution would no longer serve as an effective or necessary supplemental protective action.<br><br>In the SOC for the final rule for EP requirements for ISFSIs and for MRS facilities (60 FR 32430), the Commission responded to comments concerning site-specific EP that includes evacuation of surrounding population for an ISFSI not at a reactor site, and concluded, “The Commission does not agree that as a general matter emergency plans for an ISFSI must include evacuation planning.”<br><br>Also refer to basis for 10 CFR 50.47(b). |
| 10 CFR 50.47(c)(2).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the establishment of a 10-mile radius plume exposure pathway EPZ and a 50-mile radius ingestion pathway EPZ. | Refer to basis for 10 CFR 50.47(b)(10). |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.1.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise | The EP rule published in the *Federal Register* (76 FR 72560; November 23, 2011) amended certain requirements in 10 CFR Part 50. Among the changes, the definition of “hostile |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| require onsite protective actions during hostile action. | action" was added as an act directed toward a nuclear power plant or its personnel. This definition is based on the definition of "hostile action" provided in NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events," dated July 18, 2005 (ADAMS Accession No. ML051740058). NRC Bulletin 2005-02 is not applicable to nuclear power reactors that have permanently ceased operations and have certified that fuel has been removed from the reactor vessel. SCE certified that it had permanently ceased operations at SONGS Units 2 and 3 and that all fuel at those units had been removed from the reactor vessels. Therefore, the enhancements for hostile actions required by the 2011 EP Final Rule are not necessary for SONGS in its permanently shut down and defueled status.<br><br>Additionally, the NRC excluded non-power reactors from the definition of "hostile action" at the time of the 2011 rulemaking because, as defined in 10 CFR 50.2, a non-power reactor is not considered a nuclear power reactor and a regulatory basis had not been developed to support the inclusion of non-power reactors in the definition of "hostile action." Similarly, a decommissioning power reactor or ISFSI is not a "nuclear reactor" as defined in the NRC's regulations. Like a non-power reactor, a decommissioning power reactor also has a lower likelihood of a credible accident resulting in radiological releases requiring offsite protective measures than does an operating reactor.<br><br>Although this analysis provides a justification for exempting SONGS from "hostile action" related requirements, some EP requirements for security-based events are maintained. The classification of security-based events, notification of offsite authorities and coordination with offsite agencies under a CEMP concept are still required. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.2.<br><br>The NRC is granting exemption from portions of the rule language concerning the evacuation time analyses within the plume exposure pathway EPZ for the licensee's initial application. | Refer to basis for 10 CFR 50.47(b)(10). |
| 10 CFR Part 50, Appendix E, Section IV.3.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require use of NRC-approved ETEs and updates to State and local governments when developing protective action strategies. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.2. |
| 10 CFR Part 50, Appendix E, Section IV.4.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require licensees to update ETEs based on the most recent census data and submit the ETE analysis to the NRC prior to providing it to State and local governments for developing protective action. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.2. |
| 10 CFR Part 50, Appendix E, Section IV.5.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require licensees to estimate the EPZ permanent resident population changes once a year between decennial censuses. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.2. |
| 10 CFR Part 50, Appendix E, Section IV.6.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to submit an updated ETE analysis to the NRC based on changes in the resident population that result in exceeding specific evacuation time increase criteria. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.2. |
| 10 CFR Part 50, Appendix E, Section IV.A.1.<br><br>The NRC is granting exemption from the word "operating" in the requirement to describe the normal plant organization. | Based on the permanently shut down and defueled status of the reactor, a decommissioning reactor is not authorized to operate under 10 CFR 50.82(a). Because the licensee cannot operate the reactors, the licensee does not have a "plant operating organization." |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.A.3.<br><br>The NRC is granting exemption from the requirement to describe the licensee's headquarters personnel sent to the site to augment the onsite emergency response organization. | The number of staff at decommissioning sites is generally small but is commensurate with the need to safely store spent fuel at the facility in a manner that is protective of public health and safety. Decommissioning sites typically have a level of emergency response that does not require response by the licensee's headquarters personnel. |
| 10 CFR Part 50, Appendix E, Section IV.A.4.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to identify a position and function within its organization, which will carry the responsibility for making offsite dose projections. | Although the likelihood of events that would result in doses in excess of the EPA PAGs to the public beyond the exclusion area boundary based on the permanently shut down and defueled status of the reactor is extremely low, the licensee is still required to determine if a radiological release is occurring. If a release is occurring, then the licensee staff should promptly communicate that information to offsite authorities for their consideration. The offsite organizations are responsible for deciding what, if any, protective actions should be taken based on a CEMP.<br><br>Also refer to basis for 10 CFR 50.47(b). |
| 10 CFR Part 50, Appendix E, Section IV.A.5.<br><br>The NRC is granting exemption from the requirement for the licensee to identify individuals with special qualifications, both licensee employees and non-employees, for coping with emergencies. | SONGS has performed an on-shift staffing analysis, addressing SFP mitigating strategies, including review of collateral duties. The specific event scenario utilized for the staffing analysis involves a catastrophic loss-of-water inventory in one SFP.<br><br>In addition to the scenario described above, SONGS performed a separate case study to validate that the minimum on-shift staff can perform mitigation efforts in the event that the second SFP is also affected by a catastrophic loss-of-water inventory.<br><br>Also refer to basis for 10 CFR 50.47(b). |
| 10 CFR Part 50, Appendix E, Section IV.A.7.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require a description of the assistance expected from State, local, and Federal agencies for coping with a hostile action. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.1. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.A.8.<br><br>The NRC is granting exemption from the requirement to identify the State and local officials for ordering protective actions and evacuations. | Offsite emergency measures are limited to support provided by local police, fire departments, and ambulance and hospital services, as appropriate. Due to the low probability of DBAs or other credible events to exceed the EPA PAGs, protective actions such as evacuation should not be required, but could be implemented at the discretion of offsite authorities using a CEMP.<br><br>Also refer to basis for 10 CFR 50.47(b)(10). |
| 10 CFR Part 50, Appendix E, Section IV.A.9.<br><br>The NRC is granting exemption from the requirement for the licensee to provide an analysis demonstrating that on-shift personnel are not assigned responsibilities that would prevent performance of their assigned emergency plan functions. | The duties of the on-shift personnel at a decommissioning reactor facility are not as complicated and diverse as those for an operating power reactor. Responsibilities should be well defined in the emergency plan and procedures, regularly tested through drills and exercises audited and inspected by the licensee and the NRC.<br><br>The staff considered the similarity between the staffing levels at a permanently shut down and defueled reactor and staffing levels at an operating power reactor site. The minimal systems and equipment needed to maintain the spent nuclear fuel in the SFP or in a dry cask storage system in a safe condition require minimal personnel and is governed by Technical Specifications. In the EP final rule published in the *Federal Register* (76 FR 72560; November 23, 2011), the NRC concluded that the staffing analysis requirement was not necessary for non-power reactor licensees due to the small staffing levels required to operate the facility.<br><br>The staff also examined the actions required to mitigate the very low probability beyond-design-basis events for the SFP. In a letter dated October 1, 2014, “Docket Nos. 50-361 and 50-362 Supplement 1 to Amendment Applications 266 and 251 Permanently Defueled Technical Specifications San Onofre Nuclear Generating Station, Units 2 and 3” (ADAMS Accession No. ML14280A264), SCE withdrew the proposed changes to the Mitigating Strategies License Condition for |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| | Units 2 and 3 (2.C(26) for Unit 2 and 2.C(27) for Unit 3). This license condition requires SONGS to maintain its SFP inventory makeup strategies as discussed above.<br><br>SONGS has performed an on-shift staffing analysis, addressing SFP mitigating strategies, including review of collateral duties. The specific event scenario utilized for the staffing analysis involves a catastrophic loss-of-water inventory in one SFP.<br><br>In addition to the scenario described above, SONGS performed a separate case study to validate that the minimum on-shift staff can perform mitigation efforts in the event that the second SFP is also affected by a catastrophic loss-of-water inventory.<br><br>Also refer to basis for 10 CFR Part 50, Appendix E, Section IV.1. |
| 10 CFR Part 50, Appendix E, Section IV.B.1.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require offsite EALs and offsite protective measures and associate offsite monitoring for the emergency conditions.<br><br>In addition, the NRC is granting exemption from portions of the rule language that would otherwise require EALs based on hostile action. | NEI 99-01 was found to be an acceptable method for development of EALs. No offsite protective actions are anticipated to be necessary, so classification above the alert level is no longer required, which is consistent with ISFSI facilities.<br><br>As discussed previously, SCE requested a license amendment to revise its EAL scheme to NEI 99-01, Revision 6 in a letter dated March 31, 2014, “Permanently Defueled Emergency Action Level Scheme, San Onofre Nuclear Generating Station, Units 1, 2, and 3, respectively, and Independent Spent Fuel Storage Installation” (ADAMS Accession No. ML14092A249). Before SCE can amend its EAL scheme to reflect the risk commensurate with power reactors that have been permanently shut down and defueled, SCE needs an exemption from the requirement for the site area emergency and general emergency classifications.<br><br>Also refer to basis for 10 CFR Part 50, Appendix E, Section IV.1. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.C.1.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require EALs based on operating reactor concerns, such as offsite radiation monitoring, pressure in containment, and the response of the emergency core cooling system.<br><br>In addition, the NRC is striking language that would otherwise require offsite EALs of a site area emergency and a general emergency. | Containment parameters do not provide an indication of the conditions at a defueled facility and emergency core cooling systems are no longer required. Other indications, such as SFP level or temperature, can be used at sites where there is spent fuel in the SFPs.<br><br>In the SOC for the final rule for EP requirements for ISFSIs and for MRS facilities (60 FR 32430), the Commission responded to comments concerning a general emergency at an ISFSI and MRS, and concluded that, "…an essential element of a General Emergency is that a release can be reasonably expected to exceed EPA PAGs exposure levels off site for more than the immediate site area."<br><br>The probability of a condition at a defueled facility causing a release of radioactive material offsite necessitating a declaration of a site area or general emergency is very low. In the event of an accident at a defueled facility that meets the conditions for exemption from formal EP requirements, there will be available time for event mitigation and, if necessary, implementation of offsite protective actions using a CEMP.<br><br>NEI 99-01 was found to be an acceptable method for development of EALs. No offsite protective actions are anticipated to be necessary, so classification above the alert level is no longer required. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.C.2.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to assess, classify, and declare an emergency condition within 15 minutes. | In the EP rule published in the November 23, 2011, *Federal Register* (76 FR 72560), nuclear power reactor licensees were required to assess, classify and declare an emergency condition within 15 minutes. Non-power reactors do not have the same potential impact on public health and safety as do power reactors, and as such, non-power reactor licensees do not require complex offsite emergency response activities and are not required to assess, classify and declare an emergency condition within 15 minutes. An SFP and an ISFSI are also not nuclear power reactors as defined in the NRC's regulations and do not have the same potential impact on public health and safety as do power reactors. A decommissioning power reactor has a low likelihood of a credible accident resulting in radiological releases requiring offsite protective measures. For these reasons, the staff concludes that a decommissioning power reactor should not be required to assess, classify and declare an emergency condition within 15 minutes. |
| 10 CFR Part 50, Appendix E, Section IV.D.1.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to reach agreement with local, State, and Federal officials and agencies for prompt notification of protective measures or evacuations.<br><br>In addition, the NRC is granting exemption from identifying the associated titles of officials to be notified for each agency within the EPZs. | Refer to basis for 10 CFR 50.47(b) and 10 CFR 50.47(b)(10). |
| 10 CFR Part 50, Appendix E, Section IV.D.2.<br><br>The NRC is granting exemption from the requirement for the licensee to annually disseminate general information on EP and evacuations within the plume exposure pathway EPZ.<br><br>In addition, the NRC is granting exemption for the need for signage or other measures to | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.D.1. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| address transient populations in the event of an accident. | |
| 10 CFR Part 50, Appendix E, Section IV.D.3.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to have the capability to make notifications to State and local government agencies within 15 minutes of declaring an emergency. | While the capability needs to exist for the notification of offsite government agencies within a specified time period, previous exemptions have allowed for extending the State and local government agencies' notification time up to 60 minutes based on the site-specific justification provided.<br><br>SCE's license amendment request to approve its Permanently Defueled Emergency Plan (PDEP) dated March 31, 2014 (ADAMS Accession No. ML14092A314), provides that SONGS will make notifications to the State of California, the local counties (Orange and San Diego), and Marine Corps Base Camp Pendleton within 60 minutes of declaration of an event. Considering the very low probability of beyond-design-basis events affecting the SFP, and with the time available to initiate mitigative actions consistent with plant conditions or, if needed, for offsite authorities to implement appropriate protective measures using a CEMP (all-hazards) approach between the loss of both water and air cooling to the spent fuel and the onset of a postulated zirconium cladding fire, formal offsite radiological response plans are not needed. Therefore, decommissioning reactors are not required to notify State and local governmental agencies within 15 minutes. For similar reasons, the requirement for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ using an alert and notification system is not required.<br>Also refer to basis for 10 CFR 50.47(b) and 10 CFR 50.47(b)(10). |
| 10 CFR Part 50, Appendix E, Section IV.D.4.<br><br>The NRC is granting exemption from the requirement for the licensee to obtain U.S. Federal Emergency Management Agency (FEMA) approval of its backup alert and notification capability. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.D.3 regarding the alert and notification system requirements. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.E.8.a.(i).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to have an onsite technical support center (TSC) and EOF. | Due to the low probability of DBAs or other credible events to exceed the EPA PAGs at the site boundary, the available time for event mitigation at a decommissioning power reactor and, if needed, to implement offsite protective actions using a CEMP, an EOF would not be required to support offsite agency response. In addition, an onsite TSC with Part 50, Appendix E requirements would not be needed. SCE proposes in its PDEP that onsite actions would be directed from the Command Center. |
| 10 CFR Part 50, Appendix E, Section IV.E.8.a.(ii).<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to have an onsite operational support center (OSC). | NUREG-0696, "Functional Criteria for Emergency Response Facilities," provides that the OSC is an onsite area separate from the control room and the TSC where licensee operations support personnel will assemble in an emergency. For a decommissioning power reactor, an OSC is no longer required to meet its original purpose of an assembly area for plant logistical support during an emergency. The OSC function can be incorporated into the Command Center, as proposed by SCE. |
| 10 CFR Part 50, Appendix E, Section IV.E.8.b. and subpart Sections IV.E.8.b.(1) - E.8.b.(5).<br><br>The NRC is granting exemption from the requirements related to an offsite EOF location, space and size, communications capability, access to plant data and radiological information, and access to coping and office supplies. | Refer to basis for 10 CFR 50.47(b)(3). |
| 10 CFR Part 50, Appendix E, Section IV E.8.c. and Sections IV E.8.c.(1) - E.8.c.(3).<br><br>The NRC is granting exemption from the requirements to have an EOF with the capabilities to obtain and display plant data and radiological information; the capability to analyze technical information and provide briefings; and the capability to support events occurring at more than one site (if the emergency operations center supports more than one site). | Refer to basis for 10 CFR 50.47(b)(3). |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV E.8.d.<br><br>The NRC is granting exemption from the requirements to have an alternate facility that would be accessible even if the site is under threat of or experiencing hostile action, to function as a staging area for augmentation of emergency response staff. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.1 regarding hostile action. |
| 10 CFR Part 50, Appendix E, Section IV.E.8.e.<br><br>The NRC is granting exemption from the requirement regarding the need for the licensee to comply with paragraph 8.b of this section. | Refer to basis for 10 CFR 50.47(b)(3). |
| 10 CFR Part 50, Appendix E, Section IV.E.9.a.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to have communications with contiguous State and local governments that are within the plume exposure pathway EPZ (which is no longer required by the exemption granted to 10 CFR 50.47(b)(10)). | Refer to basis for 10 CFR 50.47(b) and 10 CFR 50.47(b)(10).<br><br>The State and the local governments in which the nuclear facility is located need to be informed of events and emergencies, so lines of communication are required to be maintained. |
| 10 CFR Part 50, Appendix E, Section IV.E.9.c.<br><br>The NRC is granting exemption from the requirements for communication and testing provisions between the control room, the onsite TSC, State/local emergency operations centers, and field assessment teams. | Because of the low probability of DBAs or other credible events that would be expected to exceed the EPA PAGs and the available time for event mitigation and, if needed, implementation of offsite protective actions using a CEMP, there is no need for the TSC, EOF, or offsite field assessment teams.<br><br>Also refer to justification for 10 CFR 50.47(b)(3). Communication with State and local emergency operations centers is maintained to coordinate assistance on site if required. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.E.9.d.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require provisions for communications from the control room, onsite TSC, and EOF with NRC Headquarters and appropriate Regional Operations Center. | The functions of the control room, EOF, TSC, and OSC may be combined into one or more locations at a permanently shutdown and defueled facility due to its smaller facility staff and the greatly reduced required interaction with State and local emergency response facilities, as compared to an operating reactor.<br><br>Also refer to basis for 10 CFR 50.47(b). |
| 10 CFR Part 50, Appendix E, Section IV.F.1. and Section IV F.1.viii.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to provide training and drills for the licensee's headquarters personnel, Civil Defense personnel, or local news media. | Decommissioning power reactor sites typically have a level of emergency response that does not require additional response by the licensee's headquarters personnel. Therefore, the staff considers exempting licensee's headquarters personnel from training requirements to be reasonable.<br><br>Due to the low probability of DBAs or other credible events to exceed the EPA PAGs, offsite emergency measures are limited to support provided by local police, fire departments, and ambulance and hospital services, as appropriate. Local news media personnel no longer need radiological orientation training since they will not be called upon to support the formal Joint Information Center. The term "Civil Defense" is no longer commonly used; references to this term in the examples provided in the regulation are, therefore, not needed. |
| 10 CFR Part 50, Appendix E, Section IV.F.2.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require testing of a public alert and notification system. | Because of the low probability of DBAs or other credible events that would be expected to exceed the limits of EPA PAGs and the available time for event mitigation and, if necessary, offsite protective actions from a CEMP, the public alert and notification system will not be used and, therefore, requires no testing.<br><br>Also refer to basis for 10 CFR 50.47(b). |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.F.2.a. and Sections IV.F.2.a.(i) through IV.F.2.a.(iii).<br><br>The NRC is granting exemption from the requirements for full participation exercises and the submittal of the associated exercise scenarios to the NRC. | Due to the low probability of DBAs or other credible events that would be expected to exceed the limits of EPA PAGs, the available time for event mitigation and, if necessary, implementation of offsite protective actions using a CEMP, no formal offsite radiological response plans are required. Therefore, the need for the licensee to exercise onsite and offsite plans with full participation by each offsite authority having a role under the radiological response plan is not required.<br><br>The intent of submitting exercise scenarios at an operating power reactor site is to check that licensees utilize different scenarios in order to prevent the preconditioning of responders at power reactors. For decommissioning power reactor sites, there are limited events that could occur and, as such, the previously routine progression to general emergency in an operating power reactor site scenario is not applicable.<br><br>The licensee would be exempt from 10 CFR Part 50, Appendix E, Section IV.F.2.a.(i)-(iii) because the licensee would be exempt from the umbrella provision of 10 CFR Part 50, Appendix E, Section IV.F.2.a. |
| 10 CFR Part 50, Appendix E, Section IV.F.2.b.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to submit scenarios for its biennial exercises of its onsite emergency plan. In addition, the NRC is granting exemption from portions of the rule language that requires assessment of offsite releases, protective action decision making, and references to the TSC, OSC, and EOF. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.F.2.a.<br><br>The low probability of DBAs or other credible events that would exceed the EPA PAGs, the available time for event mitigation and, if necessary, implementation of offsite protective actions using a CEMP, render a TSC, OSC, and EOF unnecessary. The principal functions required by regulation can be performed at an onsite location that does not meet the requirements of the TSC, OSC or EOF. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.F.2.c. and Sections IV F.2.c.(1) through F.2.c.(5).<br><br>The NRC is granting exemption from the requirements regarding the need for the licensee to exercise offsite plans biennially with full participation by each offsite authority having a role under the radiological response plan. The NRC is also granting exemptions from the conditions for conducting these exercises (including hostile action exercises) if two different licensees have facilities on the same site or on adjacent, contiguous sites, or share most of the elements defining co-located licensees. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.F.2.a. |
| 10 CFR Part 50, Appendix E, Section IV.F.2.d.<br><br>The NRC is granting exemption from the requirements to obtain State participation in an ingestion pathway exercise and a hostile action exercise, with each State that has responsibilities, at least once per exercise cycle. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.2. |
| 10 CFR Part 50, Appendix E, Section IV.F.2.e.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to allow participation exercise in licensee drills by any State and local government in the plume exposure pathway EPZ when requested. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.2. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| 10 CFR Part 50, Appendix E, Section IV.F.2.f.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require FEMA to consult with the NRC on remedial exercises. The NRC is granting exemption from portions of the rule language that discuss the extent of State and local participation in remedial exercises. | FEMA is responsible for evaluating the adequacy of offsite response during an exercise. Because the NRC is granting exemptions from the requirements regarding the need for the licensee to exercise onsite and offsite plans with full participation by each offsite authority having a role under the radiological response plan, FEMA will no longer evaluate adequacy of offsite response during remedial or other exercises.<br><br>No action is expected from State or local government organizations in response to an event at a decommissioning power reactor site other than firefighting, law enforcement and ambulance/medical services support. A memorandum of understanding should be in place for those services. Offsite response organizations will continue to take actions on a comprehensive EP basis to protect the health and safety of the public as they would at any other industrial site. |
| 10 CFR Part 50, Appendix E, Section IV.F.2.i.<br><br>The NRC is granting exemption from portions of the rule language that would otherwise require the licensee to drill and exercise scenarios that include a wide spectrum of radiological release events and hostile action. | Due to the low probability of DBAs or other credible events to exceed the EPA PAGs, the available time for event mitigation and, if needed, implementation of offsite protective actions using a CEMP, the previously routine progression to general emergency in power reactor site scenarios is not applicable to a decommissioning site. Therefore, the licensee is not expected to demonstrate response to a wide spectrum of events.<br><br>Also refer to basis for 10 CFR Part 50, Appendix E, Section IV.1 regarding hostile action. |
| 10 CFR Part 50, Appendix E, Section IV.F.2.j.<br><br>The NRC is granting exemption from the requirements regarding the need for the licensee's emergency response organization to demonstrate proficiency in key skills in the principal functional areas of emergency response.<br><br>In addition, the NRC is granting exemption during an eight calendar year exercise cycle, | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.F.2. |

| 10 CFR Part 50, Appendix E, Section IV | NRC Staff Basis for Exemption |
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| from demonstrating proficiency in the key skills necessary to respond to such scenarios as hostile actions, unplanned minimal radiological release, and scenarios involving rapid escalation to a site area emergency or general emergency. | |
| 10 CFR Part 50, Appendix E, Section IV.I<br><br>The NRC is granting exemption from the requirements regarding the need for the licensee to develop a range of protective actions for onsite personnel during hostile actions. | Refer to basis for 10 CFR Part 50, Appendix E, Section IV.E.8.d. |

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