

NRR-PMDAPEm Resource

From: Gratton, Christopher
Sent: Thursday, February 20, 2014 4:39 PM
To: Westcott, Daniel (Daniel.Westcott@duke-energy.com); Rose, Philip (Philip.Rose@duke-energy.com)
Subject: Request for Additional Information: Exemptions to the Radiological Emergency Plan Requirements
Attachments: Crystal River RAIs 2-3 (Rev 2).doc

Based on the staff's initial review of Duke Energy Florida, Inc.'s, September 26, 2013, exemption request, the attached request for additional information is required to facilitate completion of the staff's technical review. [Please note that there is one additional information request pending regarding the submittal of met data. This request should be ready for transmittal to you by the end of February.]

Please call 301-415-1055 if you would like to set up a conference call to clarify the request for information. To complete its review, the NRC staff requests the following additional information be provided by March 24, 2014.

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REQUEST FOR ADDITIONAL INFORMATION
DUKE ENERGY FLORIDA, INC.
CRYSTAL RIVER UNIT 3 NUCLEAR PLANT
EMERGENCY PLANNING EXEMPTION REQUEST
DOCKET NO. 50-302
TAC MF2981

By letter dated September 26, 2013 (Agency-wide Documents Access and Management System (ADAMS) Accession No. ML13274A584), Duke Energy Florida, Inc. (DEF) requested exemptions from portions of Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR 50) for the Crystal River Unit 3 Nuclear Plant (CR-3) Radiological Emergency Response Plan. Specifically, DEF requested exemption from certain emergency plan requirements of 10 CFR 50.47(b), 10 CFR 50.47(c)(2), and Section IV to Appendix E of 10 CFR 50. The requested exemptions would allow DEF to reduce emergency plan requirements and subsequently revise the CR-3 Radiological Emergency Response Plan consistent with the permanently defueled condition of the reactor.

By letter dated February 20, 2013 (Accession No. ML13056A005), DEF submitted certification to the NRC indicating its intention to permanently cease power operations at CR-3 pursuant to 10 CFR 50.82(a)(1)(i) and for the permanent removal of fuel from the reactor vessel pursuant to 10 CFR 50.82(a)(1)(ii). Upon docketing of these certifications, the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor, or emplacement or retention of fuel into the reactor vessel, as specified in 10 CFR 50.82(a)(2).

In reviewing the request for exemption, the Nuclear Regulatory Commission (NRC) staff used precedent from past emergency preparedness (EP) related decommissioning exemption reviews, including the reviews submitted for the EP rule changes effective November 23, 2011. The staff also informed our review with guidance and regulations applicable to an Independent Spent Fuel Storage Installation (ISFSI).

Based on the staff's initial review of DEF's September 26, 2013, EP exemption request, the following requests for additional information (RAIs) are required to facilitate completion of the staff's technical review:

(Note: In the following RAIs, ~~bold strike out~~ text indicates the requested exemption from rule language proposed by the licensee.)

(MF2981) RAI-001

10 CFR	Crystal River Request Wording	Past Precedent Wording
50.47(b)(1)	Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.	Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

Although formal offsite radiological emergency preparedness (REP) plans have typically been exempted for decommissioning sites, State and local organizations continue to be relied upon for firefighting, law enforcement, ambulance and medical services in support of the licensee's (onsite) emergency plan. Please provide further justification as to why this requirement would not be applicable based on the context described above.

(MF2981) RAI-002

10 CFR	Crystal River Request Wording	Past Precedent Wording
50.47(b)(7)	Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated	Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), [T]he principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the

	dissemination of information to the public are established.	public are established.
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10 CFR 72.32(a)(16) states, "Arrangements made for providing information to the public." While CR-3 does not currently have an ISFSI, the staff used the regulations and guidance for an ISFSI to inform the previous exemptions granted to decommissioning licensees to maintain consistency as the licensee transitions through the decommissioning process. Please describe how information would be disseminated to the public should an event occur at the CR-3 site.

(MF2981) RAI-003

10 CFR	Crystal River Request Wording	Past Precedent Wording
50.47(c)(2)	<p>Generally, the plume exposure pathway EPZ for nuclear power plants shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.</p>	<p>Generally, the plume exposure pathway EPZ for nuclear power plants shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.</p>

This requirement as it relates to gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal is not applicable to CR-3, and therefore, does not require exemption. Please remove as a requested exemption or provide specific justification for exemption.

(MF2981) RAI-004

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
<p>Appendix E, III</p>	<p>The final safety analysis report or the site safety analysis report for an early site permit that includes complete and integrated emergency plans under § 52.17(b)(2)(ii) of this chapter shall contain the plans for coping with emergencies. The plans shall be an expression of the overall concept of operation; they shall describe the essential elements of advance planning that have been considered and the provisions that have been made to cope with emergency situations. The plans shall incorporate information about the emergency response roles of supporting organizations and offsite agencies. That information shall be sufficient to provide assurance of coordination among the supporting groups and with the licensee. The site safety analysis report for an early site permit which proposes major features must address the relevant provisions of 10 CFR 50.47 and 10 CFR part 50, appendix E, within the scope of emergency preparedness matters addressed in the major features. The plans submitted must include a description of the elements set out in Section IV for the emergency planning zones (EPZs) to an extent sufficient to demonstrate that the plans provide reasonable assurance that adequate</p>	

	protective measures can and will be taken in the event of an emergency.	
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This section of the regulations is not applicable to CR-3, as it applies to only license applicants and therefore does not require exemption. Please remove as a requested exemption or provide specific justification for exemption.

(MF2981) RAI-005

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.1	The applicant's emergency plans shall contain, but not be limited to, information needed to demonstrate compliance with the elements set forth below, i.e., organization for coping with radiological emergencies, assessment actions, activation of emergency facilities and equipment, training, maintaining emergency preparedness and recovery, and onsite protective actions during hostile action . In addition, the emergency response plans submitted by an applicant for a reactor power reactor operating license under this Part, or for an early site permit (as applicable) or combined license under 10 CFR Part 52, shall contain information needed to demonstrate compliance with the standards described in §50.47(b) , and they will be evaluated against those standards.	The applicant's emergency plans shall contain, but not be limited to, information needed to demonstrate compliance with the elements set forth below, i.e., organization for coping with radiological emergencies, assessment actions, activation of emergency facilities and equipment, training, maintaining emergency preparedness and recovery, and onsite protective actions during hostile action . In addition, the emergency response plans submitted by an applicant for a reactor power reactor operating license under this Part, or for an early site permit (as applicable) or combined license under 10 CFR Part 52, shall contain information needed to demonstrate compliance with the standards described in §50.47(b), and they will be evaluated against those standards.

The standards in §50.47(b) that have not been exempted remain applicable to CR-3. Therefore, the emergency plans still "shall contain information needed to demonstrate compliance with the standards described in §50.47(b)." Please provide specific justification for exempting this requirement or delete these words from the exemption request.

(MF2981) RAI-006

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.A.4	Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections and a description of how these projections will be made and the results transmitted to State and local authorities, NRC, and other appropriate governmental entities.	Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections and a description of how these projections will be made and the results transmitted to State and local authorities, NRC, and other appropriate governmental entities.

10 CFR 72.32(a)(9) states: *“Information to be communicated.* A brief description of the types of information on facility status; radioactive releases; and recommended protective actions, if necessary, to be given to offsite response organizations and to the NRC.”

While unlikely or not projected to exceed EPA protective action guidelines, a radiological release reaching beyond the site boundary is still possible (based on elapsed time since cessation of power operations). Please provide specific justification for exempting this requirement.

(MF2981) RAI-007

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.B.1	The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the	The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the

	<p>Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite-monitoring. By June 20, 2012, for nuclear power reactor licensees, these action levels must include hostile action that may adversely affect the nuclear power plant. The initial emergency action levels shall be discussed and agreed on by the applicant or licensee and State and local governmental authorities, and approved by the NRC. Thereafter, emergency action levels shall be reviewed with the State and local governmental authorities on an annual basis.</p>	<p>Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring. By June 20, 2012, for nuclear power reactor licensees, these action levels must include hostile action that may adversely affect the nuclear power plant. The initial emergency action levels shall be discussed and agreed on by the applicant or licensee and State and local governmental authorities, and approved by the NRC. Thereafter, emergency action levels shall be reviewed with the State and local governmental authorities on an annual basis.</p>
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In the EP Final Rule, the Commission defined "hostile action" as, in part, an act directed toward a nuclear power plant or its personnel. The staff determined that a decommissioning reactor site would not be characterized as a nuclear power plant in view of the risk for offsite radiological consequences. Therefore, CR-3 would not be required to include hostile action in the EALs. Please provide specific justification for maintaining this requirement.

Maintaining the requirement for the offsite response organizations (OROs) to review the EALs on an annual basis will ensure the proper awareness by OROs of applicable emergency classifications and will also ensure that communications with the proper authorities are maintained based on continued requirement for prompt notification of State and local response organizations in the event of a classified emergency under §50.47(b)(5). As such, the basis for this requirement remains applicable. Please provide specific justification for exempting this requirement.

(MF2981) RAI-008

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix	The entire spectrum of emergency conditions that	The entire spectrum of emergency conditions that

<p>E.IV.C.1</p>	<p>involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies. The emergency classes defined shall include: (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency of 10 CFR Part 50, Appendix E, IV.C.1. These classes are further discussed in NUREG-0654/FEMA-REP-1.</p>	<p>involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies. The emergency classes defined shall include: (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency of 10 CFR Part 50, Appendix E, IV.C.1. These classes are further discussed in NUREG-0654/FEMA-REP-1.</p>
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CR-3 requested exemption 10 CFR 50.47(b)(9), "Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use". Typical EAL schemes for decommissioning sites do not include use of offsite radiation monitoring information as part of EAL scheme. Please provide justification for maintaining the requirement for use of radiation monitoring information.

(MF2981) RAI-009

10 CFR 50	Crystal River Request Wording	Past Precedence Wording
Appendix E.IV.D.3	<p>A licensee shall have the capability to notify responsible State and local governmental agencies within 15-minutes after declaring an emergency. The licensee shall demonstrate that the appropriate governmental authorities have the capability to make a public alerting and notification decision promptly on being informed by the licensee of an emergency condition. Prior to initial operation greater than 5% of rated thermal power of the first reactor at a site, each nuclear power reactor licensee shall demonstrate that administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ. The design objective of the prompt public alert and notification system shall be to have the capability to essentially complete the initial alerting and initiate notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this alerting and notification capability will range from immediate alerting and notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the appropriate government authorities to make a judgment whether or not to activate the public alert and notification system. The alerting and notification</p>	<p>A licensee shall have the capability to notify responsible State and local governmental agencies within 15-minutes after declaring an emergency. The licensee shall demonstrate that the appropriate governmental authorities have the capability to make a public alerting and notification decision promptly on being informed by the licensee of an emergency condition. Prior to initial operation greater than 5% of rated thermal power of the first reactor at a site, each nuclear power reactor licensee shall demonstrate that administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ. The design objective of the prompt public alert and notification system shall be to have the capability to essentially complete the initial alerting and initiate notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this alerting and notification capability will range from immediate alerting and notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the appropriate government authorities to make a judgment whether or not to activate the public alert and notification system. The alerting and notification</p>

	<p>capability shall additionally include administrative and physical means for a backup method of public alerting and notification capable of being used in the event the primary method of alerting and notification is unavailable during an emergency to alert or notify all or portions of the plume exposure EPZ population. The backup method shall have the capability to alert and notify the public within the plume exposure pathway EPZ, but does not need to meet the 15 minute design objective for the primary prompt public alert and notification system. When there is a decision to activate the alert and notification system, the appropriate governmental authorities will determine whether to activate the entire alert and notification system simultaneously or in a graduated or staged manner. The responsibility for activating such a public alert and notification system shall remain with the appropriate governmental authorities.</p>	<p>capability shall additionally include administrative and physical means for a backup method of public alerting and notification capable of being used in the event the primary method of alerting and notification is unavailable during an emergency to alert or notify all or portions of the plume exposure EPZ population. The backup method shall have the capability to alert and notify the public within the plume exposure pathway EPZ, but does not need to meet the 15 minute design objective for the primary prompt public alert and notification system. When there is a decision to activate the alert and notification system, the appropriate governmental authorities will determine whether to activate the entire alert and notification system simultaneously or in a graduated or staged manner. The responsibility for activating such a public alert and notification system shall remain with the appropriate governmental authorities.</p>
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10 CFR 72.32(a)(8) states: “*Notification and coordination.* A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the NRC operations center immediately after notifications of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency.”

The requirement to maintain the capability to notify the local government agencies (response organizations) is still required under §50.47(b)(5) and has been retained for previous exemption requests. Please provide specific justification for exempting requirement to notify local government agencies.

(MF2981) RAI-010

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.E.8.a(1)	A licensee onsite technical support center and an emergency operations facility from which effective direction can be given and effective control can be exercised during an emergency	A licensee onsite technical support center and an emergency operations facility from which effective direction can be given and effective control can be exercised during an emergency

A designated “facility” needs to be maintained to provide a point for command and control. Please provide specific justification for elimination of term “facility” or provide substitute terminology as part of exemption request.

(MF2981) RAI-011

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.E.8.b.	For a nuclear power reactor licensee's emergency operations facility required by paragraph 8.a of this section, either a facility located between 10 miles and 25 miles of the nuclear power reactor site(s), or a primary facility located less than 10 miles from the nuclear power reactor site(s) and a backup facility located between 10 miles and 25 miles of the nuclear power reactor site(s). An emergency operations facility may serve more than one nuclear power reactor site. A licensee desiring to locate an emergency operations facility more than 25 miles from a nuclear power reactor site shall request prior Commission approval by submitting an application for an amendment to its license. For an emergency operations facility located more than 25 miles from a nuclear power	

	<p>reactor site, provisions must be made for locating NRC and offsite responders closer to the nuclear power reactor site so that NRC and offsite responders can interact face-to-face with emergency response personnel entering and leaving the nuclear power reactor site. Provisions for locating NRC and offsite responders closer to a nuclear power reactor site that is more than 25 miles from the emergency operations facility must include the following:</p>	
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“A licensee desiring to locate an emergency operations facility more than 25 miles from a nuclear power reactor site shall request prior Commission approval by submitting an application for an amendment to its license. For an emergency operations facility located more than 25 miles from a nuclear power reactor site, provisions must be made for locating NRC and offsite responders closer to the nuclear power reactor site so that NRC and offsite responders can interact face-to-face with emergency response personnel entering and leaving the nuclear power reactor site. Provisions for locating NRC and offsite responders closer to a nuclear power reactor site that is more than 25 miles from the emergency operations facility must include the following:” is not applicable to CR-3 because the EOF is closer than 25 miles from the site. Please remove this wording from the exemption request or justify why the exemption is needed.

(MF2981) RAI-012

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.E.9.a	Provisions for communications with contiguous State/local governments within the plume exposure pathway EPZ. Such communication shall be tested monthly	Provisions for communications with contiguous State/local governments within the plume exposure pathway EPZ. Such communication shall be tested monthly

Notification of State and the local governments (response organizations) was retained in previous exemptions under §50.47(b)(5) and as discussed in RAI-010 above. Requirement in Appendix E IV.IV.E.9.a continues to be applicable to ensure that adequate lines of communication are maintained in support of these notifications. Please provide specific justification for exempting this requirement as requested.

(MF2981) RAI-013

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.E.9.c	Provision for communications among the nuclear power reactor control room, the onsite technical support center, and the emergency operations facility; and among the nuclear facility, the principal State and local emergency operations centers, and the field assessment teams . Such communications systems shall be tested annually.	Provision for communications among the nuclear power reactor control room, the onsite technical support center, and the emergency operations facility; and among the nuclear facility, the principal State and local emergency operations centers, and the field assessment teams . Such communications systems shall be tested annually.

DEK’s Basis for Requested Exemption states in part, “an onsite facility (whether the control room or a facility similar to the technical support center) would continue to be maintained, from which effective control can be exercised during an emergency.” While the basis for requested exemption indicates that one onsite facility will be maintained, the requested exemption wording infers that two separate locations: the nuclear power control room **AND** an onsite nuclear facility, will be maintained to support communications to principle offsite emergency operations centers. Please clarify or provide further justification for exemption.

Additionally, please provide specific justification for exempting provisions for communications with “local” emergency operations centers, as required in §50.47(b)(5).

(MF2981) RAI-014

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.E.9.d	Provisions for communications by the licensee with NRC Headquarters and the appropriate NRC Regional Office Operations Center from the	Provisions for communications by the licensee with NRC Headquarters and the appropriate NRC Regional Office Operations Center from the

	nuclear power reactor control room, the onsite technical support center, and the emergency operations facility . Such communications shall be tested monthly	nuclear power reactor control room, the onsite technical support center, and the emergency operations facility . Such communications shall be tested monthly
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DEK's Basis for Requested Exemption states in part, "an onsite facility (whether the control room or a facility similar to the technical support center) would continue to be maintained, from which effective control can be exercised during an emergency". While the basis for requested exemption indicates that one onsite facility will be maintained. The requested exemption wording infers that two separate locations: the nuclear power control room AND an onsite nuclear facility, will be maintained to support communications to principle offsite emergency operations centers. Please clarify or provide further justification for exemption.

(MF2981) RAI-015

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.F.1	In addition, a radiological orientation training program shall be made available to local services personnel; e.g., local emergency services/Civil Defense, local law enforcement personnel, local news media persons.	In addition, a radiological orientation training program shall be made available to local services personnel; e.g., local emergency services/ Civil Defense , local law enforcement personnel, local news media persons.

10 CFR 50.47(b)(15) states: "Radiological emergency response training is provided to those who may be called on to assist in an emergency."

10 CFR 72.32(a)(10) states: "*Training.* A brief description of the training the licensee will provide workers on how to respond to an emergency and any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel."

Local services personnel (i.e., firefighting, local law enforcement and ambulance) expected to respond onsite under the licensee's emergency plan will continue to require some basic knowledge about radiation and the facility to facilitate their timely response consistent with §50.47(b)(15), which DEF did not request an exemption from. Please provide justification for exempting this requirement, specifically how training to prepare these local services personnel to respond to an event at the CR-3 site will be provided or why training is no longer deemed necessary.

(MF2981) RAI-016

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.F.2.b	Each licensee at each site shall conduct a subsequent exercise of its onsite emergency plan every 2 years. Nuclear power reactor licensees shall submit exercise scenarios under § 50.4 at least 60 days before use in an exercise required by this paragraph 2.b. The exercise may be included in the full participation biennial exercise required by paragraph 2.c. of this section. In addition, the licensee shall take actions necessary to ensure that adequate emergency response capabilities are maintained during the interval between biennial exercises by conducting drills, including at least one drill involving a combination of some of the principal functional areas of the licensee's onsite emergency response capabilities. The principal functional areas of emergency response include activities such as management and coordination of emergency response, accident assessment, event classification, notification of offsite authorities, assessment of the onsite and offsite impact of radiological releases, protective action recommendation development, protective action decision making, plant system repair and mitigative action implementation. During these drills, activation of all of the licensee's emergency response facilities (Technical Support Center (TSC), Operations Support Center (OSC), and the Emergency Operations Facility (EOF))	Each licensee at each site shall conduct a subsequent exercise of its onsite emergency plan every 2 years. Nuclear power reactor licensees shall submit exercise scenarios under § 50.4 at least 60 days before use in an exercise required by this paragraph 2.b. The exercise may be included in the full participation biennial exercise required by paragraph 2.c. of this section. In addition, the licensee shall take actions necessary to ensure that adequate emergency response capabilities are maintained during the interval between biennial exercises by conducting drills, including at least one drill involving a combination of some of the principal functional areas of the licensee's onsite emergency response capabilities. The principal functional areas of emergency response include activities such as management and coordination of emergency response, accident assessment, event classification, notification of offsite authorities, assessment of the onsite and offsite impact of radiological releases, protective action recommendation development, protective action decision making, plant system repair and mitigative action implementation. During these drills, activation of all of the licensee's emergency response facilities (Technical Support Center (TSC), Operations Support Center (OSC), and the Emergency Operations Facility (EOF))

	would not be necessary, licensees would have the opportunity to consider accident management strategies, supervised instruction would be permitted, operating staff in all participating facilities would have the opportunity to resolve problems (success paths) rather than have controllers intervene, and the drills may focus on the onsite exercise training objectives.	would not be necessary, licensees would have the opportunity to consider accident management strategies, supervised instruction would be permitted, operating staff in all participating facilities would have the opportunity to resolve problems (success paths) rather than have controllers intervene, and the drills may focus on the onsite exercise training objectives.
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While previous exemptions granted by the NRC recognized the need to retain the ability to assess the impact of a radiological release and promptly communicate with offsite government authorities, the technical basis for evaluating exemption requests to remove formal offsite REP plan requirement assumes that release would not exceed EPA protective action guidelines at the site boundary or that sufficient time would be available for offsite response organizations to implement offsite protective measures on an ad hoc basis. As such, please provide specific justification for DEF's retaining ability for "protective action recommendation development and protective action decision making," including any agreements with State or local government authorities to retain these capabilities.

(MF2981) RAI-017

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.F.2.e	Licensees shall enable any State or local government located within the plume exposure pathway EPZ to participate in the licensee's drills when requested by such State or local government.	Licensees shall enable any State or local government located within the plume exposure pathway EPZ to participate in the licensee's drills when requested by such State or local government.

10 CFR 72.32(a)(12)states: "*Exercises.* (i) Provisions for conducting semiannual communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Radiological/Health Physics, Medical, and Fire drills shall be conducted annually. Semiannual communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. **The licensee shall invite offsite response organizations to participate in the biennial exercise.**

ii) Participation of offsite response organizations in biennial exercises, although recommended, is not required.

Exercises must use scenarios not known to most exercise participants. The licensee shall critique each exercise using individuals not having direct implementation responsibility for conducting the exercise. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques must be corrected.”

While formal REP plans may no longer be required pending granting of exemption request, the licensee’s emergency plan will still retain the requirement to promptly notify State and local government authorities and to identify, and provide orientation training to, local service personnel who may be expected to respond to the CR-3 site in the event of an emergency. Please provide additional justification for exempting this requirement, specifically addressing how these elements of the licensee’s emergency plan would be periodically tested.

(MF2981) -RAI-018

10 CFR 50	Crystal River Request Wording	Past Precedent Wording
Appendix E.IV.F.2.f	<p>Remedial exercises will be required if the emergency plan is not satisfactorily tested during the biennial exercise, such that NRC, in consultation with FEMA, cannot (1) find reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency or (2) determine that the Emergency Response Organization (ERO) has maintained key skills specific to emergency response. The extent of State and local participation in remedial exercises must be sufficient to show that appropriate corrective measures have been taken regarding the elements of the plan not properly tested in the previous exercises.</p>	<p>Remedial exercises will be required if the emergency plan is not satisfactorily tested during the biennial exercise, such that NRC, in consultation with FEMA, cannot (1) find reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency or (2) determine that the Emergency Response Organization (ERO) has maintained key skills specific to emergency response. The extent of State and local participation in remedial exercises must be sufficient to show that appropriate corrective measures have been taken regarding the elements of the plan not properly tested in the previous exercises.</p>

10 CFR 50.47(b)(14) states: “Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.”

Biennial exercises of the licensee’s emergency plan continue to be required and are subject to NRC inspection under §50.47(14). A remedial exercise, if required, ensures that, an exercise does provide reasonable assurance to the NRC that the license can and will take adequate protective measures in the event of a radiological emergency. Please provide justification for exempting this requirement.

(MF2981) RAI-019

10 CFR 50	Crystal River Request Wording	Past Precedence Wording
Appendix E.IV.F.2.h	The participation of State and local governments in an emergency exercise is not required to the extent that the applicant has identified those governments as refusing to participate further in emergency planning activities, pursuant to § 50.47(c)(1). In such cases, an exercise shall be held with the applicant or licensee and such governmental entities as elect to participate in the emergency planning process.	None.

This section of the regulations applies to an “applicant,” and therefore, is not applicable to CR-3, and does not require exemption. Please provide justification for further staff consideration as an exemption.

(MF2981) RAI-020

10 CFR 50	Crystal River Request Wording	Past Precedence Wording
Appendix E.IV.I	By June 20, 2012, for nuclear power reactor licensees, a range of protective actions to protect onsite personnel during hostile action	By June 20, 2012, for nuclear power reactor licensees, a range of protective actions to protect onsite personnel during hostile action

	<p>must be developed to ensure the continued ability of the licensee to safely shut down the reactor and perform the functions of the licensee's emergency plan.</p>	<p>must be developed to ensure the continued ability of the licensee to safely shut down the reactor and perform the functions of the licensee's emergency plan.</p>
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Appendix E.IV.I is applicable only to onsite protective actions during hostile actions, which DEF is requesting to be exempted. However, exemption request retains the statement “and perform the functions of the licensee’s emergency plan.” Please provide rationale for retaining this statement and provide context for its applicability.

(MF2981) RAI-021

The Executive Summary in NUREG-1738 states (in part), “the staff’s analyses and conclusions apply to decommissioning facilities with SFPs [*spent fuel pools*] that meet the design and operational characteristics assumed in the risk analysis. These characteristics are identified in the study as industry decommissioning commitments (IDCs) and staff decommissioning assumptions (SDAs). Provisions for confirmation of these characteristics would need to be an integral part of rulemaking.” The IDCs and SDAs are listed in tables 4.1-1 and 4.1-2, respectively, of NUREG-1738. Please explain if/how CR-3 meets each of these IDCs and SDAs, or why they are not considered applicable.

(MF2981) RAI-022

The first page of Enclosure 2 includes the statement, “shaded text identifies the extent of the proposed exemption with respect to the regulation.” However, no shaded text appears in the table, while it appears that strikeouts are actually used to identify proposed exemption text. Please clarify the use of shaded areas or strikeouts.

(MF2981) RAI-023

Part of the justification for relaxing formal offsite REP plan requirements is based on the ability to perform actions to prevent or mitigate the effects of a zirconium fire at CR-3. Section 3.1.5 of Enclosure 1 to DEK’s license amendment request #315, states “This analysis determined the time to heat up adiabatically to 900 degrees Celsius to be 19.7 hours. This result meets the acceptance criteria. Further, because of the length of time it would take for the adiabatic heatup to occur, there is ample time to respond to any partial drain down event that might cause such an occurrence by restoring cooling or makeup, or providing spray. As a result, the likelihood that such a scenario would progress to a zirconium fire is not deemed credible.

Please provide additional information related to:

- a. What is the availability of trained personnel to perform the required actions?
- b. How is the referenced equipment maintained and tested?
- c. Are there procedures developed to perform this task and how are they controlled?
- d. Will these procedures and equipment be referenced in the emergency plan since the basis for this exemption, in part, is the existence of these mitigative strategies?