

**Cross Reference of Fermi 3 Emergency Plan to
Other Regulations and Regulatory Documents In Accordance with
Regulatory Guide 1.206 Section C.I.13.3.1**

Part 1, 10 CFR 50, Appendix E - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
IV. 1	The applicant's emergency plans shall contain, but not necessarily 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 organization, notification procedures, emergency facilities and equipment, training, maintaining emergency preparedness, recovery, and onsite protective actions during hostile action. In addition, the emergency response plans submitted by an applicant for a nuclear 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.	See below, IV.2 through IV I H	
IV. 2	This nuclear power reactor license applicant shall also provide an analysis of the time required to evacuate various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations, using the most recent U.S. Census Bureau data as of the date the applicant submits its application to the NRC.	Appendix 5	Complete ETE included in COLA Part 5 COLA Part 10, Section 3.7.3
IV. 3	Nuclear power reactor licensees shall use NRC approved evacuation time estimates (ETEs) and updates to the ETEs in the formulation of protective action recommendations and shall provide the ETEs and ETE updates to State and local governmental authorities for use in developing offsite protective action strategies.	II.J.7.; II.J.8;; II.P.3	Complete ETE included in COLA Part 5 COLA Part 10, Section 3.7.3

IV. 4	Within 365 days of the later of the date of the availability of the most recent decennial census data from the U.S. Census Bureau or December 23, 2011, nuclear power reactor licensees shall develop an ETE analysis using this decennial data and submit it under § 50.4 to the NRC. These licensees shall submit this ETE analysis to the NRC at least 180 days before using it to form protective action recommendations and providing it to State and local governmental authorities for use in developing offsite protective action strategies.	N/A	See Item IV .7
IV. 5	During the years between decennial censuses, nuclear power reactor licensees shall estimate EPZ permanent resident population changes once a year, but no later than 365 days from the date of the previous estimate, using the most recent US Census Bureau annual resident population estimate and State/local government population data, if available	II.P.3	
IV. 6	If at any time during the decennial period, the EPZ permanent resident population increases such that it causes the longest ETE value for the 2-mile zone or 5-mile zone, including all affected Emergency Response Planning Areas, or for the entire 10-mile EPZ to increase by 25 percent or 30 minutes, whichever is less, from the nuclear power reactor licensee's currently NRC approved or updated ETE, the licensee shall update the ETE analysis to reflect the impact of that population increase. The licensee shall submit the updated ETE analysis to the NRC under § 50.4 no later than 365 days after the licensee's determination that the criteria for updating the ETE have been met and at least 180 days before using it to form protective action recommendations and providing it to State and local governmental authorities for use in developing offsite protective action strategies.	II.P.3	

IV. 7	After an applicant for a combined license under part 52 of this chapter receives its license, the licensee shall conduct at least one review of any changes in the population of its EPZ at least 365 days prior to its scheduled fuel load. The licensee shall estimate EPZ permanent resident population changes using the most recent U.S. Census Bureau annual resident population estimate and State/local government population data, if available. If the EPZ permanent resident population increases such that it causes the longest ETE value for the 2-mile zone or 5-mile zone, including all affected Emergency Response Planning Areas, or for the entire 10-mile EPZ, to increase by 25 percent or 30 minutes, whichever is less, from the licensee's currently approved ETE, the licensee shall update the ETE analysis to reflect the impact of that population increase. The licensee shall submit the updated ETE analysis to the NRC for review under § 50.4 of this chapter no later than 365 days before the licensee's scheduled fuel load.	N/A	COLA Part 10, Section 3.7.3
IV A.	The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization	II.B.1; II.B.3; II.B.4	
IV A.	and the means for notification of such individuals in the event of an emergency.	II.E.1	
IV A.1	A description of the normal plant operating organization.	II.B.1; II.B.4 Table II.B-1 Figure II.B-1	
IV A.2.a	A description of the onsite emergency response organization with a detailed discussion of: Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency.	II.A.1; II.B.1; II.B.2; II.B.3; II.B.4 Table II.B-1 Table II.B-2 Figures II.B-1 through II.B.4	
IV A.2.b	Plant staff emergency assignments;	II.B.4 Table II.B-1 Table II.B-2 Figures II.B-1 through II.B-4	
IV A.2.c	Authorities, responsibilities, and duties of an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.	II.B.3	

IV A.3	A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.	II.B.6	
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.	Table II.B-1; Table II.B-2 II.D.1.D.i; II.E.3.h&i; II.H.10; II.I.6; II.I.9; II.J.7; Appendix 4, Radiological Monitoring and Assessment	
IV A.5	Identification, by position and function to be performed, of other employees of the licensee with special qualifications for coping with emergency conditions that may arise. Other persons with special qualifications, such as consultants, who are not employees of the licensee and who may be called upon for assistance for emergencies shall also be identified. The special qualifications of these persons shall be described.	II.B.7; II.B.8; II.C.4	
IV A.6	A description of the local offsite services to be provided in support of the licensee's emergency organization.	II.B.5; II.B.8; II.L.1; II.L.3	
IV A.77	By June 23, 2014, identification of, and a description of the assistance expected from, appropriate State, local, and Federal agencies with responsibilities for coping with emergencies, including hostile action at the site. For purposes of this appendix, "hostile action" is defined as an act directed toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force.	II.A.1.1; II.A.1.2; Figure II.A-1; II.B.5; II.B.8; II.C.1 through II.C.4	
IV A.8	Identification of the State and/or local officials responsible for planning for, ordering, and controlling appropriate protective actions, including evacuations when necessary.	II.A.1; II.J.7; II.J.9 through J.11	
IV A.99	By December 24, 2012, for nuclear power reactor licensees, a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan.		 COLA Part 10, Section 3.9

IV B.11	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,	II.I.3; II.I.6; II.I.7; II.I.8; Appendix 4, Radiological Monitoring and Assessment	COLA Part 10, Section 3.7
IV B.1 (continued))	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 Commission, and other Federal agencies,	II.D.2	
IV B.1 (continued))	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.	II.D.2	
IV B.1 (continued)	By June 20, 2012, for nuclear power reactor licensees, these action levels must include hostile action that may adversely affect the nuclear power plant.		COLA Part 10, Section 3.7
IV B.1 (continued))	The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring.	II.D.2	
IV B.1 (continued)	By June 20, 2012, for nuclear power reactor licensees, these action levels must include hostile action that may adversely affect the nuclear power plant.		COLA Part 10, Section 3.7
IV B.1 (continued)	By June 20, 2012, for nuclear power reactor licensees, these action levels must include hostile action that may adversely affect the nuclear power plant.		COLA Part 10, Section 3.7
IV B.1 (continued))	These emergency action levels shall be discussed and agreed on by the applicant and State and local governmental authorities and approved by NRC.	II.D.3	
IV B.1 (continued))	They shall also be reviewed with the State and local governmental authorities and an annual basis.	II.D.3	
IV B.22	A licensee desiring to change its entire emergency action level scheme shall submit an application for an amendment to its license and receive NRC approval before implementing the change. Licensees shall follow the change process in § 50.54(q) for all other emergency action level changes.	II.P.4	COLA Part 10, Section 3.7
IV C.11	The entire spectrum of emergency conditions that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described.	II.D.1	
IV C.1 (continued))	The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described.	II.D.1.A through II.D.1.D; II.E.1	

IV C.1 (continued))	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.	II.D.1; II.D.2	
IV C.1 (continued))	The existence, but not the details of a message authentication scheme shall be noted for such agencies.	II.E	
IV C.1 (continued))	The emergency classes defined shall include: (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are further discussed in NUREG – 0654; FEMA – REP – 1.	II.D.1A through II.D.1D	
IV C.22	By June 20, 2012, nuclear power reactor licensees shall establish and maintain the capability to assess, classify, and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an emergency action level has been exceeded and shall promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level. Licensees shall not construe these criteria as a grace period to attempt to restore plant conditions to avoid declaring an emergency action due to an emergency action level that has been exceeded. Licensees shall not construe these criteria as preventing implementation of response actions deemed by the licensee to be necessary to protect public health and safety provided that any delay in declaration does not deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety.	II.D	EP ITAAC 14.0,, 14.1.1.A.1.a
IV D.1	Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs.	II.E.4 through E.6	

IV D.2	Provisions shall be described for yearly dissemination to the public within the plume exposure pathway EPZ of basic emergency planning information, such as the methods and times required for public notification and the protective actions planned if an accident occurs, general information as to the nature and effects of radiation, and a listing of local broadcast stations that will be used for dissemination of information during an emergency. Signs or other measures shall also be used to disseminate to any transient population within the plume exposure pathway EPZ appropriate information that would be helpful if an accident occurs.	II.G.1; II.G.2	
IV D.3	A licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency.	II.E.1(b)(1)	
IV D.3 (continued))	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 percent 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.	II.E.4;, II.E.5	

IV D.3 (continued)	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 governmental authorities to make a judgment whether or not to activate the public alert and notification system. The alerting and notification 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 pathway 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.	II.E.4.; II.E.5		
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IV D.44	4. If FEMA has approved a nuclear power reactor site's alert and notification design report, including the backup alert and notification capability, as of December 23, 2011, then the backup alert and notification capability requirements in Section IV.D.3 must be implemented by December 24, 2012. If the alert and notification design report does not include a backup alert and notification capability or needs revision to ensure adequate backup alert and notification capability, then a revision of the alert and notification design report must be submitted to FEMA for review by June 24, 2013, and the FEMA-approved backup alert and notification means must be implemented within 365 days after FEMA approval. However, the total time period to implement a FEMA-approved backup alert and notification means must not exceed June 22, 2015.	II.E.4.; II.E.5	
IV E.1	Adequate provisions shall be made and described for emergency facilities and equipment, including; Equipment at the site for personnel monitoring;	II.H.1; II.H.9 Table II.H-1	
IV E.2	Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment.	II.H.5; II.H.6; II.H.9; II.I.7; II.I.8 II.I.10 Table II.H-1	
IV E.3	Facilities and supplies at the site for decontamination of onsite individuals;	II.H.9; II.J.3; II.J.4; II.J.5; II.I.5 II.I.7 Table II.H-1	
IV E.4	Facilities and medical supplies at the site for appropriate emergency first aide treatment;	II.L.2	
IV E.5.5	Arrangements for medical service providers qualified to handle radiological emergencies onsite;	II.L.1.; Appendix 2, Certification Letters	
IV E.6	Arrangements for transportation of contaminated injured individuals from the site to specifically identified treatment facilities outside the site boundary;	II.L.3 Appendix 2, Certification Letters	
IV E.7	Arrangements for treatment of individuals injured in support of licensed activities on the site at treatment facilities outside the site boundary;	II.L.1 Appendix 2, Certification Letters	
IV E.8..a (i).i	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;	II.H.1.c	
IV E.8..a (.ii)i	For nuclear power reactor licensees, a licensee onsite operational support center;	II.H.1.d	

IV E.8..bb	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 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: (1) Space for members of an NRC site team and Federal, State, and local responders; (2) Additional space for conducting briefings with emergency response personnel; (3) Communication with other licensee and offsite emergency response facilities; (4) Access to plant data and radiological information; and (5) Access to copying equipment and office supplies;	II.H.1.d	
IV E.8.c. .c(1).1	By June 20, 2012, for a nuclear power reactor licensee's emergency operations facility required by paragraph 8.a of this section, a facility having the following capabilities: (1) The capability for obtaining and displaying plant data and radiological information for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves;	II.H.1.d	

IV E.8.c. .c(2).2	(2) The capability to analyze plant technical information and provide technical briefings on event conditions and prognosis to licensee and offsite response organizations for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves; and	II.H.1.d	
IV E.8.c. (3).c.3	(3) The capability to support response to events occurring simultaneously at more than one nuclear power reactor site if the emergency operations facility serves more than one site; and	II.A.1.b.; II.H.1.d	
IV E.8.d.d	For nuclear power reactor licensees, an alternative facility (or facilities) 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 and collectively having the following characteristics: the capability for communication with the emergency operations facility, control room, and plant security; the capability to perform offsite notifications; and the capability for engineering assessment activities, including damage control team planning and preparation, for use when onsite emergency facilities cannot be safely accessed during hostile action. The requirements in this paragraph 8.d must be implemented no later than December 23, 2014, with the exception of the capability for staging emergency response organization personnel at the alternative facility (or facilities) and the capability for communications with the emergency operations facility, control room, and plant security, which must be implemented no later than June 20, 2012.	II.H.1.d	
IV E.8.ee	A licensee shall not be subject to the requirements of paragraph 8.b of this section for an existing emergency operations facility approved as of December 23, 2011;	N/A	
IV E.9	At least one onsite and one offsite communications system; each system shall have a backup power source. All communication plans shall have arrangements for emergencies; including titles and alternates for those in charge at both ends of the communication links and the primary and backup means of communication.	II.F.1; II.F.2	

IV E.9.a	Where consistent with the function of the governmental agency, these arrangements will include: Provision for communications with contiguous State/local governments within the plume exposure pathway EPZ. Such communications shall be tested monthly.	II.F.1; II.F.3; II.N.2	
IV E.9.bb	Provision for communications with Federal emergency response organizations. Such communications systems shall be tested annually.	II.F.1; II.N.2.a	
IV E.9.cc	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.	II.F.1; II.F.3; II.N.2.a	
IV E.9.dd	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.	II.F.1; II.F.3; II.N.2.all.F.1; II.F.3; II.N.2.a	
IV F.1.ii	The program to provide for: (a) The training of employees and exercising, by periodic drills, of emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties, and (b) The participation in the training and drills by other persons whose assistance may be needed in the event of a radiological emergency shall be described. This shall include a description of specialized initial training and periodic retraining programs to be provided to each of the following categories of emergency personnel: i. Directors and/or coordinators of the plant emergency organization;	II.N.1; II.N.2 II.O.1.a; II.O.3	
IV F.1.ii	Personnel responsible for accident assessment, including control room shift personnel;	II.O.1.b; II.O.3	
IV F.1.iii	Radiological monitoring teams;	II.O.1.c; II.O.3	
IV F.1.iv	Fire control teams (fire brigades);	II.O.1.f; II.O.3	
IV F.1.v	Repair and damage control teams;	II.O.1.e; II.O.3	
IV F.1.vi	First aid and rescue teams;	II.O.1.f; II.O.3	
IV F.1.vii	Medical support personnel;	II.O.1.h; II.O.3	
IV F.1.viii	Licensee's headquarters support personnel;	II.O.1.i; II.O.3	
IV F.1.ix	Security personnel.	II.O.1.d; II.O.3	

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.	II.O.2	
IV F.2.2	The plan shall describe provisions for the conduct of emergency preparedness exercises as follows: Exercises shall test the adequacy of timing and content of implementing procedures and methods, test emergency equipment and communications networks, test the public alert and notification system, and ensure that emergency organization personnel are familiar with their duties .(foot note 3: : Use of site specific simulators or computers is acceptable for any exercise.)	II.N.1	
IV F.2.aa	A full participation (foot note 4: Full participation when used in conjunction with emergency preparedness exercises for a particular site means appropriate offsite local and State authorities and licensee personnel physically and actively take part in testing their integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant. Full participation includes testing major observable portions of the onsite and offsite emergency plans and mobilization of State, local and licensee personnel and other resources in sufficient numbers to verify the capability to respond to the accident scenario.) exercise which tests as much of the licensee, State, and local emergency plans as is reasonably achievable without mandatory public participation shall be conducted for each site at which a power reactor is located. Nuclear power reactor licensees shall submit exercise scenarios under § 50.4 at least 60 days before use in a full participation exercise required by this paragraph 2.a.	II.N.1	

IV F.2.a.(i)j	For an operating license issued under this part, this exercise must be conducted within two years before the issuance of the first operating license for full power (one authorizing operation above 5 percent of rated power) of the first reactor and shall include participation by each State and local government within the plume exposure pathway EPZ and each state within the ingestion exposure pathway EPZ. If the full participation exercise is conducted more than 1 year prior to issuance of an operating license for full power, an exercise which tests the licensee's onsite emergency plans must be conducted within one year before issuance of an operating license for full power. This exercise need not have State or local government participation.	N/A (See IV F.2.a. (ii) below)	
IV F.2.a. (ii).ii	For a combined license issued under part 52 of this chapter, this exercise must be conducted within two years of the scheduled date for initial loading of fuel. If the first full participation exercise is conducted more than one year before the scheduled date for initial loading of fuel, an exercise which tests the licensee's onsite emergency plans must be conducted within one year before the scheduled date for initial loading of fuel. This exercise need not have State or local government participation. If FEMA identifies one or more deficiencies in the state of offsite emergency preparedness as the result of the first full participation exercise, or if the Commission finds that the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, the provisions of § 50.54(gg) apply.		EP ITAAC 14.0

IV F.2.a. (.iii)i	For a combined license issued under part 52 of this chapter, if the applicant currently has an operating reactor at the site, an exercise, either full or partial participation, (foot note 5: Partial participation when used in conjunction with emergency preparedness exercises for a particular site means appropriate offsite authorities shall actively take part in the exercise sufficient to test direction and control functions; i.e., (a) protective action decision making related to emergency action levels, and (b) communication capabilities among affected State and local authorities and the licensee.) shall be conducted for each subsequent reactor constructed on the site. This exercise may be incorporated in the exercise requirements of Sections IV.F.2.b. and c. in this appendix. If FEMA identifies one or more deficiencies in the state of offsite emergency preparedness as the result of this exercise for the new reactor, or if the Commission finds that the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, the provisions of § 50.54(gg) apply.		EP ITAAC 14.0
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IV F.2.b.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)) 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.	II.N.1.; II.N.1.a		
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IV F.2.c	Offsite plans for each site shall be exercised biennially with full participation by each offsite authority having a role under the radiological response plan. Where the offsite authority has a role under a radiological response plan for more than one site, it shall fully participate in one exercise every two years and shall, at least, partially participate in other offsite plan exercises in this period. If two different licensees each have licensed facilities located either on the same site or on adjacent, contiguous sites, and share most of the elements defining co-located licensees,(foot note 6: Co-located licensees are two different licensees whose licensed facilities are located either on the same site or on adjacent, contiguous sites, and that share most of the following emergency planning and siting elements: a. Plume exposure and ingestion emergency planning zones; b. Offsite governmental authorities; c. Offsite emergency response organizations; d. Public notification system; and/or e. Emergency facilities.) then each licensee shall:	II.N.1	
IV F.2.c (continued))	(1) Conduct an exercise biennially of its onsite emergency plan; (2) Participate quadrennially in an offsite biennial full or partial participation exercise; (3) Conduct emergency preparedness activities and interactions in the years between its participation in the offsite full or partial participation exercise with offsite authorities, to test and maintain interface among the affected State and local authorities and the licensee. Colocated licensees shall also participate in emergency preparedness activities and interaction with offsite authorities for the period between exercises; (4) Conduct a hostile action exercise of its onsite emergency plan in each exercise cycle; and (5) Participate in an offsite biennial full or partial participation hostile action exercise in alternating exercise cycles.	II.N.1	

IV F.2.dd	Each State with responsibility for nuclear power reactor emergency preparedness should fully participate in the ingestion pathway portion of exercises at least once every exercise cycle. In States with more than one nuclear power reactor plume exposure pathway EPZ, the State should rotate this participation from site to site. Each State with responsibility for nuclear power reactor emergency preparedness should fully participate in a hostile action exercise at least once every cycle and should fully participate in one hostile action exercise by December 31, 2015. States with more than one nuclear power reactor plume exposure pathway EPZ should rotate this participation from site to site.	II.N.1	
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.		
IV F.2.ff	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.		Addressed in EIPs
IV F.2.gg	All exercises, drills, and training that provide performance opportunities to develop, maintain, or demonstrate key skills must provide for formal critiques in order to identify weak or deficient areas that need correction. Any weaknesses or deficiencies that are identified in a critique of exercises, drills, or training must be corrected.	II.N.4; II.N.5	

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 10 CFR 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.	N/A	
IV F.2.ii	Licensees shall use drill and exercise scenarios that provide reasonable assurance that anticipatory responses will not result from preconditioning of participants. Such scenarios for nuclear power reactor licensees must include a wide spectrum of radiological releases and events, including hostile action. Exercise and drill scenarios as appropriate must emphasize coordination among onsite and offsite response organizations.	II.N.1	

IV F.2.jj	The exercises conducted under paragraph 2 of this section by nuclear power reactor licensees must provide the opportunity for the ERO to demonstrate proficiency in the key skills necessary to implement the principal functional areas of emergency response identified in paragraph 2.b of this section. Each exercise must provide the opportunity for the ERO to demonstrate key skills specific to emergency response duties in the control room, TSC, OSC, EOF, and joint information center. Additionally, in each eight calendar year exercise cycle, nuclear power reactor licensees shall vary the content of scenarios during exercises conducted under paragraph 2 of this section to provide the opportunity for the ERO to demonstrate proficiency in the key skills necessary to respond to the following scenario elements: hostile action directed at the plant site, no radiological release or an unplanned minimal radiological release that does not require public protective actions, an initial classification of or rapid escalation to a Site Area Emergency or General Emergency, implementation of strategies, procedures, and guidance developed under § 50.54(hh)(2), and integration of offsite resources with onsite response. The licensee shall maintain a record of exercises conducted during each eight year exercise cycle that documents the content of scenarios used to comply with the requirements of this paragraph. Each licensee shall conduct a hostile action exercise for each of its sites no later than December 31, 2015. The first eight-year exercise cycle for a site will begin in the calendar year in which the first hostile action exercise is conducted. For a site licensed under Part 52, the first eight-year exercise cycle begins in the calendar year of the initial exercise required by Section IV.F.2.a.	II.N.1	
IV G	Provisions to be employed to ensure that the emergency plan, its implementing procedures, and emergency equipment and supplies are maintained up to date shall be described.	II.P.4	
IV H	Criteria to be used to determine when, following an accident, reentry of the facility would be appropriate or when operation could be resumed shall be described.	II.M.1	

IV II	Onsite Protective Actions During Hostile Action By June 20, 2012, for nuclear power reactor licensees, a range of protective actions to protect onsite personnel during hostile action 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.	II.A.; II.E.; II.J.; II.J.6	
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Part 2, 10 CFR 50.47, Emergency Plans - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
(b) 1	This onsite and, except as provided in paragraph (d) of this section, offsite emergency response plans for nuclear power reactors must meet the following standards: Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned,	Intro. B; II.A.1; Figure II.A-1	
(b) 1 (continued)	the emergency responsibilities of the various supporting organizations have been specifically established,	II.A.1	
(b) 1 (continued)	and each principal response organization has staff to respond and to augment its initial response on a continuous basis.	II.A.1; II.A.3	
(b) 2	On-shift facility licensee responsibilities for emergency response are unambiguously defined.	II.B.1; II.B.3; II.B.4 Table II.B-1	
(b) 2 (continued)	timely augmentation of response capabilities is available	II.B.4; Table II.B-1	
(b) 2 (continued)	and the interfaces among various onsite response activities and offsite support and response activities are specified.	Figure II.A-1	
(b) 3	arrangements for requesting and effectively using assistance resources have been made,	II.B.7; II.B.8; Appendix 2, Certification Letters II.C.1 through C.4	
(b) 3 (continued)	arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made,	II.C.2	
(b) 3 (continued)	and other organizations capable of augmenting the planned response have been identified.	II.C.4	
(b) 4	A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee.	II.D.1; II.D.2	
(b) 4 (continued)	and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.	II.E.1 through E.3	

(b) 5	Procedures have been established for notification, by the licensee, of State and local response organizations	II.E.1	
(b) 5 (continued)	and for notification of emergency personnel by all organizations;	II.E.1	
(b) 5 (continued)	the content of initial and follow up messages to response organizations and the public has been established;	II.E.2; II.E.3	
(b) 5 (continued)	and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.	II.E.4 through E.6	
(b) 6	Provisions exist for prompt communications among principal response organizations to emergency personnel	II.F.1	
(b) 6 (continued)	and to the public.	II.E.4 through E.6	
(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),	II.G.1; II.G.2	
(b) 7 (continued)	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,	II.G.3; II.G.4	
(b) 7 (continued)	and procedures for coordinated dissemination of information to the public are established.	II.G.3; II.G.4	
(b) 8	Adequate emergency facilities and equipment to support the emergency response are provided and maintained,	II.H.1	
(b) 9	Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.	II.I	
(b) 10	A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public.	II.J.7	
(b) 10 (continued))	In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate.	II.A.1.b; II.B.3	
(b) 10 (continued))	Evacuation time estimates have been developed by applicants and licensees.	II.J.8	COLA Part 10, Section 3.9

(b) 10 (continued))	Licensees shall update the evacuation time estimates on a periodic basis.	II.P.3	COLA Part 10, Section 3.9
(b) 10 (continued)	Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place.	II.J.7, Table II.J-1	
(b) 10 (continued)	and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.	II.J.11	
(b) 11	Means for controlling radiological exposures, in an emergency, are established for emergency workers.	II.K.1	
(b) 11 (continued)	The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.	II.K.1, Table II.K-1	
(b) 12	Arrangements are made for medical services for contaminated injured individuals.	II.L.1 through L.3	
(b) 13	General plans for recovery and reentry are developed.	II.M.1; II.M.2	
(b) 14	Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities,	II.N.1	
(b) 14 (continued)	periodic drills are (will be) conducted to develop and maintain key skills,	II.N.2	
(b) 14 (continued)	and deficiencies identified as a result of exercises or drills are (will be) corrected.	II.N.4; II.N.5	
(b) 15	Radiological emergency response training is provided to those who may be called on to assist in an emergency.	II.O.1 through O.4	
(b) 16	Responsibilities for plan development and review and for distribution of emergency plans are established,	II.P.4; II.P.5	
(b) 16 (continued)	and planners are properly trained	II.P.1	

Part 3, 10 CFR 50.33, Contents of Applications; General Information - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
10 CFR 50.33 (g)	(g) If the application is for an operating license for a nuclear power reactor, the applicant shall submit radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within the plume exposure pathway Emergency Planning Zone (EPZ) ⁽⁴⁾ , as well as the plans of State governments wholly or partially within the ingestion pathway EPZ ⁽⁵⁾ . Generally, the plume exposure pathway EPZ for nuclear power reactors 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 the 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 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.	Supplemental Documents	Michigan Emergency Management Plan Michigan Department of Environmental Quality Nuclear Facilities Emergency Management Plan (NFEMP) Monroe County Emergency Management Plan Wayne County Emergency Operations Plan The Ohio Plan for Response to Radiation Emergencies at Commercial Nuclear Power Plants

Part 3, 10 CFR 50.33, Contents of Applications; General Information - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
	Emergency Planning Zones (EPZs) are discussed in NUREG-0396, EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light-Water Nuclear Power Plants," December 1978. If the State and local emergency response plans have been previously provided to the NRC for inclusion in the facility docket, the applicant need only provide the appropriate reference to meet the requirement.	Supplemental Documents	Michigan Emergency Management Plan Michigan Department of Environmental Quality Nuclear Facilities Emergency Management Plan (NFEMP) Monroe County Emergency Management Plan Wayne County Emergency Operations Plan The Ohio Plan for Response to Radiation Emergencies at Commercial Nuclear Power Plants
10 CFR 50.33 (j)	(j) If the application contains Restricted Data or other defense information, it shall be prepared in such manner that all Restricted Data and other defense information are separated from the unclassified information.	N/A	

Part 4, 10 CFR 50.34, Contents of Applications; Technical Information - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
10 CFR 50.34	(a) <i>Preliminary safety analysis report.</i> Each application for a construction permit shall include a preliminary safety analysis report. The minimum information ⁵ to be included shall consist of the following: (10) A discussion of the applicant's preliminary plans for coping with emergencies. Appendix E sets forth items which shall be included in these plans.	N/A	
	(b)(6)(v) Plans for coping with emergencies, which shall include the items specified in appendix E.	Emergency Plan complies. Refer to Appendix E Cross Reference above.	
	(f) (2) (xxv) Provide an onsite Technical Support Center, an onsite Operational Support Center, and, for construction permit applications only, a nearsite Emergency Operations Facility. (III.A.1.2).	II.H.1.b II.H.1.c II.H.1.d	

Part 5, 10 CFR 54, Conditions of Licenses - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
10 CFR 50.54 (q)	(1) Definitions for the purpose of this section: (i) Change means an action that results in modification or addition to, or removal from, the licensee's emergency plan. All such changes are subject to the provisions of this section except where the applicable regulations establish specific criteria for accomplishing a particular change. (ii) Emergency plan means the document(s), prepared and maintained by the licensee, that identify and describe the licensee's methods for maintaining emergency preparedness and responding to emergencies. An emergency plan includes the plan as originally approved by the NRC and all subsequent changes made by the licensee with, and without, prior NRC review and approval under paragraph (q) of this section. (iii) Emergency planning function means a capability or resource necessary to prepare for and respond to a radiological emergency, as set forth in the elements of section IV. of appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b). (iv) Reduction in effectiveness means a change in an emergency plan that results in reducing the licensee's capability to perform an emergency planning function in the event of a radiological emergency. (2) A holder of a license under this part, or a combined license under part 52 of this chapter after the Commission makes the finding under § 52.103(g) of this chapter, shall follow and maintain the effectiveness of an emergency plan that meets the requirements in appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b). (3) The licensee may make changes to its emergency plan without NRC approval only if the licensee performs and retains an analysis demonstrating that the changes do not reduce the effectiveness of the plan and the plan, as changed, continues to meet the requirements in appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b). (4) The changes to a licensee's emergency plan that reduce the effectiveness of the plan as defined in paragraph (q)(1)(iv) of this section may not be implemented without prior approval by the NRC. A licensee desiring to make such a change after February 21, 2012 shall submit an application for an amendment to its license. In addition to the filing requirements of §§ 50.90 and 50.91, the request must include all emergency plan pages affected by that change and must be accompanied by a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the licensee's emergency plan, as revised, will continue to meet the requirements in appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b). (5) The licensee shall retain a record of each change to the emergency plan made without prior NRC approval for a period of three years from the date of the change and shall submit, as specified in § 50.4, a report of each such change made after February 21, 2012, including a summary of its analysis, within 30 days after the change is put in effect. (6) The nuclear power reactor licensee shall retain the emergency plan and each change for which prior NRC approval was obtained pursuant to paragraph (q)(4) of this section as a record until the Commission terminates the license for the nuclear power reactor..	II.P.4;, II.P.5	AAdditional guidance is provided in supporting procedures.

Part 5, 10 CFR 54, Conditions of Licenses - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
10 CFR 50.54 (t)	(t)(1) The licensee shall provide for the development, revision, implementation, and maintenance of its emergency preparedness program. The licensee shall ensure that all program elements are reviewed by persons who have no direct responsibility for the implementation of the emergency preparedness program either: (i) At intervals not to exceed 12 months or, (ii) As necessary, based on an assessment by the licensee against performance indicators, and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect emergency preparedness, but no longer than 12 months after the change. In any case, all elements of the emergency preparedness program must be reviewed at least once every 24 months. (2) The review must include an evaluation for adequacy of interfaces with State and local governments and of licensee drills, exercises, capabilities, and procedures. The results of the review, along with recommendations for improvements, must be documented, reported to the licensee's corporate and plant management, and retained for a period of 5 years. The part of the review involving the evaluation for adequacy of interface with State and local governments must be available to the appropriate State and local governments.	II.P.9	

Part 6, 10 CFR 50.72, Immediate Notification Requirements for Operating Nuclear Power Plants - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
10 CFR 50.72	(a) General requirements. (1) Each nuclear power reactor licensee licensed under §§ 50.21 (b) or 50.22 of this part shall notify the NRC Operations Center via the Emergency Notification System of: (i) The declaration of any of the Emergency Classes specified in the licensee's approved Emergency Plan;	II.E.1(2)	
	(2) If the Emergency Notification System is inoperative, the licensee shall make the required notifications via commercial telephone service, other dedicated telephone system, or any other method which will ensure that a report is made as soon as practical to the NRC Operations Center.	II.E.1(2) II.F.1.A.5	
	(3) The licensee shall notify the NRC immediately after notification of the appropriate State or local agencies and not later than one hour after the time the licensee declares one of the Emergency Classes.	II.E.1(2)	
	(4) The licensee shall activate the Emergency Response Data System (ERDS) as soon as possible but not later than one hour after declaring an Emergency Class of alert, site area emergency, or general emergency. The ERDS may also be activated by the licensee during emergency drills or exercises if the licensee's computer system as the capability to transmit the exercise data.	II.E.1(2) II.F.1.A.5 II.H.1.a	

Part 6, 10 CFR 50.72, Immediate Notification Requirements for Operating Nuclear Power Plants - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
	(c) <i>Followup notification.</i> With respect to the telephone notifications made under paragraphs (a) and (b) of this section, in addition to making the required initial notification, each licensee, shall during the course of the event: (1) <i>Immediately report</i> (i) any further degradation in the level of safety of the plant or other worsening plant conditions, including those that require the declaration of any of the Emergency Classes, if such a declaration has not been previously made, or (ii) any change from one Emergency Class to another, or (iii) a termination of the Emergency Class. (3) Maintain an open, continuous communication channel with the NRC Operations Center upon request by the NRC.	II.E.1(1) II.E.3 N/A	Addressed in EPIPs

Part 7, 10 CFR 52.79, Contents of Applications; Technical Information in Final Safety Analysis Report- Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
10 CFR 52.79	(a)(21) The application must contain emergency plans complying with the requirements of § 50.47 of this chapter, and 10 CFR part 50, appendix E;	Emergency Plan complies. Refer to Appendix E Cross Reference above.	
	(a)(22)(i) All emergency plan certifications that have been obtained from the State and local governmental agencies with emergency planning responsibilities must state that: (A) The proposed emergency plans are practicable; (B) These agencies are committed to participating in any further development of the plans, including any required field demonstrations; and (C) These agencies are committed to executing their responsibilities under the plans in the event of an emergency; (ii) If certifications cannot be obtained after sustained, good faith efforts by the applicant, then the application must contain information, including a utility plan, sufficient to show that the proposed plans provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the site.	Appendix 2, Certification Letters	

Part 8, 10 CFR 52.80, Contents of Application; Additional Technical Information - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
10 CFR 52.80	(a) The proposed inspections, tests, and analyses, including those applicable to emergency planning, that the licensee shall perform, and the acceptance criteria which are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the combined license, the provisions of the Act, and the Commission's rules and regulations.	N/A	Addressed by ITAACs in COLA Part 10.
	(1) If the application references an early site permit with ITAAC, the early site permit ITAAC must apply to those aspects of the combined license which are approved in the early site permit.	N/A	
	(2) If the application references a standard design certification, the ITAAC contained in the certified design must apply to those portions of the facility design which are approved in the design certification.	N/A	Addressed by ITAACs in COLA Part 10.
	(3) If the application references an early site permit with ITAAC or a standard design certification or both, the application may include a notification that a required inspection, test or analysis in the ITAAC has been successfully completed and that the corresponding acceptance criterion has been met. The Federal Register notification required by § 52.85 must indicate that the application includes this notification.	N/A	Addressed by ITAACs in COLA Part 10.

Part 9, 10 CFR 100, Reactor Site Criteria - Cross-Reference

REGULATION	STATEMENT	E PLAN	COMMENTS
10 CFR 100.1	(c) Siting factors and criteria are important in assuring that radiological doses from normal operation and postulated accidents will be acceptably low, that natural phenomena and potential man-made hazards will be appropriately accounted for in the design of the plant, that site characteristics are such that adequate security measures to protect the plant can be developed, and that physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans are identified.	N/A	
10 CFR 100.21	(g) Physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans must be identified;	N/A	

Part 10, NRC Bulletin 2005-02 - Cross-Reference

SECTION	STATEMENT	E PLAN	COMMENTS
A	Security-based Emergency Classification Levels and Emergency Action Levels	II.D.1; II.D.2	
B	NRC Notifications	II.E.1(2)	Prompt notification to the NRC regarding security events are addressed in Operations procedures as they are made prior to emergency classification.
C	Onsite Protective Actions	II.J Table II.J-1	
D	Emergency Response Organization Augmentation	II.B.4 Table II.B-1	
E	Drill and Exercise Program	II.N	

Part 11, NRC Bulletin 80-15 - Cross-Reference

SECTION	STATEMENT	E PLAN	COMMENTS
BL 80-15	Back-up power for the ENS		Not addressed in Emergency Plan

Part 12, Regulatory Issue Summary 2004-13 - Cross-Reference

SECTION	STATEMENT	E PLAN	COMMENTS
RIS 2004-13	Consideration of Sheltering in the Licensee's Range of Protection Action Recommendations	II.J.7	

Part 13, Generic Letter 91-14 - Cross-Reference

SECTION	STATEMENT	E PLAN	COMMENTS
GL 91-14	Emergency Telecommunications	II.F.1; II.F.2	

Part 14, Information Notice 85-44 - Cross-Reference

SECTION	STATEMENT	E PLAN	COMMENTS
IN 85-44	Emergency Communication System Monthly Test	II.F.3; II.N.2.a	