

DTE Energy[®]



Detroit Edison

**Fermi 3
Combined
License
Application**

**Part 10:
ITAAC**

**Revision 1
March 2010**

**TIER 1 INFORMATION
AND
INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE
CRITERIA**

1. TIER 1 INFORMATION

DCD Tier 1 is incorporated by reference with the following exception.

Replace [Section 2.3.2](#), Design Description with the following -

The Area Radiation Monitoring System (ARMS) continuously monitors the gamma radiation levels within the various areas of the plant and provides an early warning to operating personnel when high radiation levels are detected so the appropriate action can be taken to minimize occupational exposure.

1. The functional arrangement (location) of the ARMS equipment is as listed on [Table 2.3.2-1R](#).
2. Each ARM channel listed in [Table 2.3.2-1R](#) initiates a MCR alarm and a local audible alarm (if provided) when the radiation level exceeds a preset limit.
3. Each ARM channel listed in [Table 2.3.2-1R](#) is provided with indication of radiation level.

Table 2.3.2-1R ARM Locations (Sheet 1 of 3)

Area	Description & Location
Reactor Building	RB Refueling Floor Area #1
Reactor Building	RB Refueling Floor Area #2
Reactor Building	RB New Fuel Buffer Pool
Reactor Building	RB New Fuel Buffer Pool
Reactor Building	RB RWCU/SDC Pump
Reactor Building	RB Sump Pumps
Reactor Building*	RB RWCU/SDC Train A Heat Exchanger
Reactor Building*	RB RWCU/SDC Train B Heat Exchanger
Reactor Building	RB Lower Equipment Hatch
Reactor Building	RB Lower Personnel Hatch
Reactor Building	FMCRD HCU Room B
Reactor Building	FMCRD HCU Room D
Reactor Building	RB RWCU/SDC Filter Demineralizer Area
Reactor Building	RB Radiological Control Area Entrance
Reactor Building	RB H2/O2 Monitoring (CMS) Skid
Reactor Building	RB H2/O2 Monitoring (CMS) Skid Panel
Reactor Building	Instrument Rack Area #1
Reactor Building	Instrument Rack Area #2
Reactor Building	Instrument Rack Area #3
Reactor Building	Instrument Rack Area #4
Reactor Building	Instrument Rack Area #5
Reactor Building	Instrument Rack Area #6
Reactor Building	Instrument Rack Area #7
Reactor Building	Instrument Rack Area #8
Reactor Building	RB IFTS Maintenance Room (Multiple)
Reactor Building	Fuel Handling Machine
Reactor Building	RB Remote Shutdown Panel A Area
Reactor Building	RB Remote Shutdown Panel B Area
Fuel Building	FB Spent Fuel Floor
Fuel Building	Fuel Handling Machine
Fuel Building	FB Fuel Transfer Cask Area
Fuel Building	FB FAPCS Heat Exchangers
Fuel Building	FB FAPCS Heat Exchangers
Fuel Building*	FB FAPCS Backwash Transfer Pumps
Fuel Building	FB Sump Pumps
Fuel Building	RB Ground Grade Access Pathway
Fuel Building	FB Wash Down Bay Entry Door
Fuel Building	FB IFTS Fuel Bldg Isolation Valve Room (Inside)
Fuel Building	Fuel Prep Machine

Table 2.3.2-1R ARM Locations (Sheet 2 of 3)

Area	Description & Location
Radwaste Building	RW Electrical Equipment Room
Radwaste Building	RW Control Room
Radwaste Building	RW High Activity
Radwaste Building	RW High Activity Transfer Pump Room
Radwaste Building	RW Trailer Access Area
Radwaste Building*	RW Liquid Radioactive Waste Treatment Processing Systems Area
Radwaste Building*	RW Wet Solid Radioactive Waste Treatment Processing Area
Radwaste Building*	RW Dry Solid Waste Treatment Sorting Room Area
Radwaste Building*	RW Packaged Waste Storage Area
Turbine Building*	Main Condenser Vault Area
Turbine Building*	Feedwater Heater Drain Cooler 1 A/B/C Room
Turbine Building	H2 and O2 Analyzer Room B
Turbine Building	Condensate Pumps Room
Turbine Building*	Low Pressure Heater Area
Turbine Building*	Feedwater Heater 4 and Feedwater Storage Tank Room
Turbine Building*	Turbine Bldg Steam Tunnel
Turbine Building*	Condensate Drain Tank and Steam Jet Air Ejector/H2 Recombiner and Cooler Room B
Turbine Building*	Steam Jet Air Ejector/H2 Recombiner and Cooler Room A
Turbine Building*	Feedwater Heater 5B and 6B Room
Turbine Building	Condensate Filter Access Hatch Room
Turbine Building	Corridor/Turbine Building Operating Floor
Turbine Building	Corridor/Turbine Operating Floor
Turbine Building	Crane Travel Area
Turbine Building	Equipment Main Access Area
Turbine Building	RCCWS Pump/Exchanger Room A
Turbine Building*	Offgas Charcoal Adsorber Vessel Vault
Turbine Building	Condensate Pleated Filter Valve/Condensate Filter Transfer Pumps/Condensate Flow Control Valve Station Room
Turbine Building	Condensate Pleated Filter Valve/Condensate Filter Transfer Pumps/Condensate Flow Control Valve Station Room
Turbine Building	Condenser Sampling Pump Room A
Turbine building	Condenser Sampling Pump Room B
Turbine Building	Condensate Deep Bed Demineralizer Valve Room
Turbine Building	H2 and O2 Analyzer Room A
Turbine Building*	Feedwater Heater 5A and 6A Room
Turbine Building*	Feedwater heater 7B Room
Turbine Building*	Feedwater Heater 7A Room
Turbine Building	Turbine Bldg Sampling/Drain Sump C Room
Turbine Building	Corridor/Exhaust Duct Area

Table 2.3.2-1R ARM Locations (Sheet 3 of 3)

Area	Description & Location
Turbine Building	RCCWS Pump/Exchanger Room B
Turbine Building*	Main Condenser Vault Area
Control Building	Main Control Room
* ARMs located in accessible areas where abnormal plant evolutions or anticipated operational occurrences can potentially result in dose rate increases of 1mSv/hr (100mRem/hr) or more.	



2. COLA ITAAC

The Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) for the COLA are provided in tabular form, consistent with the format shown in RG 1.206 Table C.II.1-1.

The COLA-ITAAC consist of the following four parts:

1. Design Certification ITAAC
2. Emergency Planning ITAAC
3. Physical Security ITAAC
4. Site-Specific ITAAC

This set of COLA-ITAAC is included herein. Completion of the ITAAC is a proposed condition of the combined license to be satisfied prior to fuel load.

2.1 DESIGN CERTIFICATION ITAAC

The Design Certification ITAAC are contained in DCD Tier 1, which is incorporated in by reference in Section 1.

2.2 PHYSICAL SECURITY ITAAC

The Physical Security ITAAC are contained in DCD Tier 1, which is incorporated in by reference in Section 1.

2.3 EMERGENCY PLANNING ITAAC

The Emergency Planning ITAAC are provided in [Table 2.3-1](#).

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
1.0 Assignment of Responsibility – Organizational Control			
<p>10 CFR 50.47(b)(1) – Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the EPZs have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principle response organization has staff to respond and to augment its initial response on a continuous basis.</p>	<p>1.1 The staff exists to provide 24-hour per day emergency response and manning of communications links, including continuous operations for a protracted period. [A.1.e, A.4**]</p> <p>[**A.1.e, A.4 corresponds to NUREG-0654/FEMA-REP-1 evaluation criteria.]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.A.1.b, II.A.1.e</p>	<p>1.1 An inspection of the implementing procedures or staffing rosters will be performed.</p>	<p>1.1 Emergency plan implementing procedures provide for 24-hour per day emergency response staffing and manning of communications links, including continuous operations for a protracted period.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
2.0 Onsite Emergency Organization			
<p>10 CFR 50.47(b)(2) – On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.</p>	<p>2.1 The staff exists to provide minimum and augmented on-shift staffing levels, consistent with Table B-1 of NUREG-0654/FEMA-REP-1, Rev. 1. [B.5, B.7]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.B.3, II.B.4, II.B.6, Table II.B-1</p>	<p>2.1 An inspection of the implementing procedures or staffing rosters will be performed.</p>	<p>2.1 Emergency plan implementing procedures provide minimum and augmented on-shift staffing levels, consistent with Table II.B-1 of the Fermi 3 Emergency Plan.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
3.0 Emergency Response Support and Resources			
<p>10 CFR 50.47(b)(3) – Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee’s near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.</p>	<p>Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.</p>	<p>Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.</p>	<p>Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
4.0 Emergency Classification System			
<p>10 CFR 50.47(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, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.</p>	<p>4.1 A standard emergency classification and emergency action level (EAL) scheme exists, and identifies facility system and effluent parameters constituting the bases for the classification scheme. [D.1]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.D.1</p>	<p>4.1 An inspection of the control room, technical support center (TSC), and emergency operations facility (EOF) will be performed to verify that they have displays for retrieving facility system and effluent parameters that constitute the bases for the classification scheme in Emergency Plan Implementing Procedure, “Emergency Classification.”</p>	<p>4.1.1 The specific parameters identified in the EALs listed in ITA Section 4.1 have been retrieved and displayed in the control room, TSC, and EOF.</p> <p>4.1.2 The ranges available in the control room, TSC, and EOF encompasses the values for the specific parameters identified in the EALs listed in ITA Section 4.1.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
5.0 Notification Methods and Procedures			
<p>10 CFR 50.47(b)(5) – Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.</p>	<p>5.1 The means exist to notify responsible State and local organizations within 15 minutes after the licensee declares an emergency. [E. 1]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.E.1</p>	<p>5.1 A test will be performed of the capabilities.</p>	<p>5.1.1 Communications have been established via Ringdown Phone System among the control room, the State of Michigan, Monroe County, and Wayne County within 15 minutes after an emergency has been declared.</p>
	<p>5.2 The means exist to notify emergency response personnel. [E.2]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.E.1</p>	<p>5.2 A test will be performed of the capabilities.</p>	<p>5.2 Notification to the Fermi 3 emergency response organization has been performed.</p>
	<p>5.3 The means exists to notify and provide instructions to the populace within the plume exposure EPZ. [E.6]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.E.2 & E.5</p>	<p>NOTE: The means to notify and provide instructions to the populace within the plume exposure EPZ is addressed by Acceptance Criteria 14.1.1.2.</p>	

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
6.0 Emergency Communications			
<p>10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.</p>	<p>6.1 The means exist for communications among the control room, TSC, EOF, principal State, and local, emergency operations centers (EOCs), and radiological emergency teams. [F.1.d]</p> <p><u>ITAAC Element addressed in:</u></p> <p>COL EP II.F.1.A & B</p>	<p>6.1 A test will be performed of the capabilities.</p>	<p>6.1.1 Communications via the Ringdown Phone System have been established among the Control Room, TSC, EOF, State of Michigan, Monroe County, Wayne County, and the Province of Ontario, Canada.</p> <p>6.1.2 Communications have been established between the TSC and radiological emergency teams.</p>
	<p>6.2 The means exist for communications from the control room, TSC, and EOF to the NRC headquarters and regional office EOCs (including establishment of the Emergency Response Data System (ERDS) between the onsite computer system and the NRC Operations Center.) [F.1.f]</p> <p><u>ITAAC Element addressed in:</u></p> <p>COL EP II.F.1.A.5</p>	<p>6.2 A test will be performed of the capabilities.</p>	<p>6.2 Communications have been established from the control room, TSC, and EOF to NRC Headquarters and Region III EOCs, and an access port for ERDS is provided.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
7.0 Public Education and Information			
<p>10 CFR 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 dissemination of information to the public are established.</p>	<p>7.1 The licensee has provided space which may be used for a limited number of the news media at the near-site Emergency Operations Facility (EOF) [G.3.b]</p> <p><u>ITAAC Element addressed in:</u></p> <p>COL EP II.G.3 & 4</p>	<p>7.1 An inspection of the Joint Information Center will be performed to verify that space is provided for a limited number of the news media.</p>	<p>7.1 The Joint Information Center has space for approximately 500 news media personnel.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
8.0 Emergency Facilities and Equipment			
<p>10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.</p>	<p>8.1 The licensee has established a technical support center (TSC) and onsite operations support center (OSC). [H.1]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.H.1.b & c</p>	<p>8.1.1 An inspection of the as-built TSC and OSC will be performed.</p>	<p>8.1.1 The TSC had at least 182 square meters (1950 square feet) of floor space.</p> <p>8.1.2 The following communications equipment has been provided in the TSC and voice transmission and reception have been accomplished:</p> <ul style="list-style-type: none"> • NRC systems: Emergency Notification System (ENS), Health Physics Network (HPN), Reactor Safety Counterpart Link (RSCL), Protective Measures Counterpart Link (PMCL), Management Counterpart Link (MCL) • Dedicated telephone to EOF • Dedicated telephone to control room • Dedicated telephone to OSC <p>8.1.3 The TSC has been located in the Electrical Building.</p> <p>8.1.4 The TSC includes radiation monitors and a ventilation system with a high efficiency particulate air (HEPA) and charcoal filter.</p> <p>8.1.5 A back-up electrical power supply is available for the TSC.</p> <p>8.1.6 Reception, storage, processing, and display of plant and environmental information used to initiate emergency measures and conduct emergency assessment has been accomplished at the TSC.</p> <p>8.1.7 The OSC is in a location separate from the control room.</p> <p>8.1.8 The following communications equipment has been provided in the OSC and voice transmission and reception have been accomplished:</p> <ul style="list-style-type: none"> • Dedicated telephone to control room • Dedicated telephone to TSC • Plant page system (voice transmission only)

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>8.2 The licensee has established an emergency operations facility (EOF). [H.2]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.H.1.d</p>	<p>8.2 An inspection of the EOF will be performed.</p>	<p>8.2.1 A report exists that confirms the EOF is greater than 279 square meters (3000 square feet).</p> <p>8.2.2 The EOF includes shielding with a protection factor of 20.</p> <p>8.2.3 The EOF includes HVAC system with HEPA filters.</p> <p>8.2.4 The EOF includes portable airborne radioactivity and area radiation monitors with local alarm capability.</p> <p>8.2.5 Voice transmission and reception have been accomplished between the EOF and TSC.</p> <p>8.2.6 Voice transmission and reception have been accomplished between the EOF, the Control Room, TSC, and the following organizations: NRC, the State of Michigan, Monroe County, and Wayne County.</p> <p>8.2.7 Acquisition, display and evaluation of radiological, meteorological, and plant system data pertinent to determining offsite protective measures has been accomplished at the EOF.</p>
	<p>8.3 The means exists to initiate emergency measures, consistent with Appendix 1 of NUREG-0654/FEMA-REP-1, Rev. 1. [H.5]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.H.4</p>	<p>8.3 An analysis of emergency plan implementing procedures will be performed.</p>	<p>8.3 Emergency plan implementing procedures provide a process to initiate emergency measures, consistent with emergency plan implementing procedures, "Emergency Classification."</p>
	<p>8.4 The means exists to acquire data from, or for emergency access to, offsite monitoring and analysis equipment. [H.6]</p> <p><u>ITAAC Element addressed in:</u> COL II. C.3, II.H.1.d, II.H.4.a, II.H.4.b. II.H.5.b</p>	<p>8.4 An analysis of emergency plan implementing procedures will be performed.</p>	<p>8.4 Emergency plan implementing procedures provide a methodology to acquire data from, or for emergency access to, offsite monitoring and analysis equipment.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>8.5 The means exists to provide offsite radiological monitoring equipment in the vicinity of the nuclear facility. [H.7]</p> <p><u>ITAAC Element addressed in:</u> COL II.H.2 & II.H.6</p>	<p>8.5 An analysis of emergency plan implementing procedures will be performed.</p>	<p>8.5 Emergency plan implementing procedures provide for offsite radiological monitoring equipment in the vicinity of Fermi 3.</p>
	<p>8.6 The means exists to provide meteorological information, consistent with Appendix 2 of NUREG-0654/FEMA-REP-1, Rev. 1. [H.8]</p> <p><u>ITAAC Element addressed in:</u> COL II.H.7</p>	<p>8.6 An analysis of emergency plan implementing procedures will be performed.</p>	<p>8.6 Emergency plan implementing procedures include provisions for obtaining meteorological information, consistent with section II.H.7 of the Fermi 3 Emergency Plan.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
9.0 Accident Assessment			
<p>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.</p>	<p>9.1 The means exist to provide initial and continuing radiological assessment throughout the course of an accident. [I.2]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.1.2, Appendix 4</p>	<p>9.1 A test of the emergency plan will be conducted by performing an exercise or drill to verify the capability to perform accident assessment.</p>	<p>9.1 A report exists that confirms an exercise or drill has been accomplished including use of selected monitoring parameters identified in the EALs listed in ITA Section 4.1 to assess simulated degraded plant and initiate protective actions in accordance with the following criteria:</p> <p>A. Accident Assessment and Classification</p> <ol style="list-style-type: none"> 1. Initiating conditions identified, EALs parameters determined, and the emergency correctly classified throughout the drill. <p>B. Radiological Assessment and Control</p> <ol style="list-style-type: none"> 1. Onsite radiological surveys performed and samples collected. 2. Radiation exposure to emergency workers monitored and controlled. 3. Field monitoring teams assembled and deployed. 4. Field team data collected and disseminated. 5. Dose projections developed. 6. The decision whether to issue radioprotective drugs to Fermi 3 emergency workers made. 7. Protective action recommendations developed and communicated to appropriate authorities.
	<p>9.2 The means exists to determine the source term of releases of radioactive material within plant systems, and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors. [I.3]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.1.3, Appendix 4</p>	<p>9.2 An analysis of emergency plan implementing procedures will be performed.</p>	<p>9.2 A methodology has been established to determine source term of releases of radioactive materials within plant systems, and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>9.3 The means exists to continuously assess the impact of the release of radioactive materials to the environment, accounting for the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions. [I.4]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.1.4, Appendix 4</p>	<p>9.3 An analysis of emergency plan implementing procedures will be performed.</p>	<p>9.3 A methodology has been provided to establish the relationship between effluent monitor readings and onsite and offsite exposures and contamination for various meteorological conditions.</p>
	<p>9.4 The means exists to acquire and evaluate meteorological information. [I.5]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.1.5</p>	<p>9.4 An inspection of the control room, TSC, and EOF will be performed to verify the availability of the following meteorological data is available:</p> <ul style="list-style-type: none"> • Wind speed (at 10 m and 60 m) • Wind direction (at 10 m and 60 m) • Ambient air temperature (at 10 m and 60 m) 	<p>9.4.1 The specified meteorological data was available at the control room, TSC, and EOF.</p> <p>9.4.2 The specified meteorological data was transmitted to and received by the offsite NRC center and State of Michigan.</p>
	<p>9.5 The means exists to determine the release rate and projected doses if the instrumentation used for assessment is off-scale or inoperable. [I.6]</p>	<p>9.5 An analysis of emergency plan implementing procedures will be performed.</p>	<p>9.5 A methodology has been provided to determine the release rate and projected doses if the instrumentation used for assessment is off-scale or inoperable.</p>
	<p>9.6 The means exist for field monitoring within the plume exposure EPZ. [I.7]</p>	<p>9.6 An analysis of emergency plan implementing procedures will be performed.</p>	<p>9.6 Emergency plan implementing procedures provide for field monitoring within the plume exposure pathway EPZ.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>9.7 The means exist to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways, including activation, notification means, field team composition, transportation, communication, monitoring equipment, and estimated deployment times. [I.8]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.1.7</p>	<p>9.7 An analysis of emergency plan implementing procedures will be performed.</p>	<p>9.7 A methodology has been established to provide rapid assessment of the actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways.</p>
	<p>9.8 The capability exists to detect and measure radioiodine concentrations in air in the plume exposure EPZ, as low as 10⁻⁷ µCi/cc (microcuries per cubic centimeter) under field conditions. [I.9]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.1.8</p>	<p>9.8 A test of Fermi 3 field survey instrumentation will be performed to verify the capability to detect airborne concentrations as low as 1E-07 microcuries per cubic centimeters.</p>	<p>9.8 Instrumentation used for monitoring I-131 to detect airborne concentrations as low as 1E-07 microcuries per cubic centimeters has been provided.</p>
	<p>9.9 The means exist to estimate integrated dose from the projected and actual dose rates, and for comparing these estimates with the EPA protective action guides (PAGs). [I.10]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.1.9, Appendix 4</p>	<p>9.9 An analysis of emergency plan implementing procedures will be performed to verify that a methodology is provided to estimate integrated dose from the projected or actual dose rates, and for comparing these estimates with the EPA protective action guides (PAGs).</p>	<p>9.9 A methodology has been established to estimate integrated dose rates from projected and actual dose rates, and for comparing these estimates with the EPA PAGs.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
10.0 Protective Response			
<p>10 CFR 50.47(b)(10) – A range of protective actions has been developed for the plume exposure EPZ for emergency workers and the public. 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. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure EPZ appropriate to the locale have been developed.</p>	<p>10.1 The means exist to warn and advise onsite individuals of an emergency, including those in areas controlled by the operator, including:[J.1]</p> <ol style="list-style-type: none"> 1. employees not having emergency assignments; 2. visitors; 3. contractor and construction personnel; and 4. other persons who may be in the public access areas, on or passing through the site, or within the owner controlled area. <p><u>ITAAC Element addressed in:</u> COL EP II.J.1.</p>	<p>10.1 A test of the onsite warning and communications capability will be performed during a drill or exercise.</p>	<p>10.1.1 A report exists that confirms that, during a drill or exercise, notifications and instructions were provided to onsite workers and visitors, within the Protected Area, over the plant public announcement system.</p> <p>10.1.2 A report exists that confirms that, during a drill or exercise, audible warnings were provided to individuals outside the Protected Area, but within the Owner Controlled Area.</p>
	<p>10.2 The means exist to radiological monitor people evacuated from the site. [J.3]</p>	<p>10.2 An analysis of emergency plan implementing procedures will be performed.</p>	<p>10.2 Emergency plan implementing procedures provide for radiological monitoring of people evacuated from the site.</p>
	<p>10.3 The means exists to notify and protect all segments of the transient and resident population. [J.10]</p>	<p>10.3 An analysis of offsite emergency plans will be performed.</p>	<p>10.3 State and local plans or procedures provide methods to notify and protect all segments of the transient and resident population.</p>
	<p>10.4 The means exists to register and monitor evacuees at relocation centers. [J.12]</p>	<p>10.4 An analysis of offsite emergency plans will be performed.</p>	<p>10.4 State and local plans or procedures provide methods to register and monitor evacuees at relocation centers.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
11.0 Radiological Exposure Control			
10 CFR 50.47(b)(11) – Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity PAGs.	11.1 The means exists to provide onsite radiation protection. [K.2]	11.1 An analysis of emergency plan implementing procedures will be performed.	11.1 Onsite procedures provide onsite radiation protection.
	11.2 The means exists to provide 24-hour-per-day capability to determine the doses received by emergency personnel and maintain dose records. [K.3]	11.2 An analysis of emergency plan implementing procedures will be performed.	11.2 Onsite procedures provide for 24-hour-per-day capability to determine the doses received by emergency personnel and maintain dose records.
	11.3 The means exists to decontaminate relocated onsite and emergency personnel, including waste disposal. [K.5.b, K.7]	11.3 An analysis of emergency plan implementing procedures will be performed.	11.3 Onsite procedures provide a methodology to decontaminate relocated onsite and emergency personnel, including waste disposal.
	11.4 The means exists to provide onsite contamination control measures. [K.6]	11.4 An analysis of emergency plan implementing procedures will be performed.	11.4 Onsite procedures provide a methodology for onsite contamination control measures.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
12.0 Medical and Public Health Support			
10 CFR 50.47(b)(12) – Arrangements are made for medical services for contaminated, injured individuals.	12.1 Arrangements have been implemented for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake. [L.1]	12.1 An analysis of letters of agreement will be performed.	12.1 Arrangements have been implemented with Mercy Memorial Hospital in Monroe Michigan, and Oakwood Southshore Medical Center in Trenton, Michigan, for evaluation of radiation exposure and uptake.
	12.2 The means exists for onsite first aid capability. [L.2]	12.2 An analysis of emergency plan implementing procedures will be performed.	12.2 Onsite procedures provide for onsite first aid capability.
	12.3 Arrangements have been implemented for transporting victims of radiological accidents, including contaminated injured individuals, from the site to offsite medical support facilities. [L.4]	12.3 An analysis of letters of agreement will be performed.	12.3 Arrangements have been implemented for transporting victims of radiological accidents, including contaminated injured individuals, from the site to offsite medical support facilities.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
13.0 Recovery and Reentry Planning and Post-Accident Operations			
10 CFR 50.47(b)(13) – General plans for recovery and reentry are developed.	Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.	Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.	Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
14.0 Exercises and Drills			
<p>10 CFR 50.47(b)(14) – 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.</p>	<p>14.1 Licensee conducts a full participation exercise to evaluate major portions of emergency response capabilities, which includes participation by each State, local and provincial agency within the plume exposure EPZ, and each State and provincial agency within the ingestion exposure EPZ. [N.1]</p> <p><u>ITAAC Element addressed in:</u> COL EP II.N.1.</p>	<p>14.1 A full participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.</p>	<p>14.1.1.1 A report exists that confirms an exercise was conducted within the specified time periods of Appendix E to 10 CFR Part 50, onsite exercise objectives have been met, and there were no uncorrected onsite exercise deficiencies.</p> <p>14.1.1.2 A report exists that confirms the following exercise objectives were satisfied by meeting the specified performance criteria:</p> <p><u>A. Accident Assessment and Classification</u></p> <ol style="list-style-type: none"> 1. Demonstrate the ability to identify initiating conditions, determine emergency action level (EAL) parameters, and correctly classify the emergency throughout the exercise. <p><u>Performance Criterion:</u></p> <ol style="list-style-type: none"> a. Determine the correct emergency classification level based on events which were in progress, considering past events and their impact on the current conditions, within 15 minutes from the time the initiating condition(s) or EAL is identified.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>B. Notifications</u></p> <ol style="list-style-type: none"> 1. Demonstrate the ability to alert, notify and mobilize site emergency response personnel. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. Complete the designated actions in accordance with emergency plan implementing procedures and perform the announcement within 15 minutes of the initial event classification for an Alert or higher b. Mobilize site emergency responders in accordance with emergency plan implementing procedures within 15 minutes of the initial event classification for an Alert or higher. 2. Demonstrate the ability to notify responsible State, local government agencies beginning no later than 15 minutes and the NRC no later than 60 minutes after declaring an emergency. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. Transmit information in accordance with approved emergency plan implementing procedures beginning no later than 15 minutes after event classification. b. Transmit information in accordance with approved emergency plan implementing procedures, beginning no later than 60 minutes after last transmittal for a follow-up notification to State and local authorities. c. Transmit information in accordance with emergency plan implementing procedures beginning no later than 60 minutes after event classification for an initial notification of the NRC. 3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. Initiate notification of onsite individuals within 15 minutes of notification.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>C. Emergency Response</u></p> <ol style="list-style-type: none"> 1. Demonstrate the capability to direct and control emergency operations. <u>Performance Criterion:</u> <ol style="list-style-type: none"> a. Command and control is demonstrated by the control room in the early phase of the emergency, and the technical support center (TSC) within 60 minutes of declaration of an Alert or higher emergency classification. 2. Demonstrate the ability to transfer emergency direction from the control room (simulator) to the TSC upon activation. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. Turnover briefings are conducted in accordance with emergency plan implementing procedures. b. Documentation of transfer of duties is completed in accordance with emergency plan implementing procedures. 3. Demonstrate the ability to perform assembly and accountability for all onsite individuals within 30 minutes of an emergency requiring protected area assembly and accountability. <u>Performance Criterion:</u> <ol style="list-style-type: none"> a. Protected area (PA) personnel assembly and accountability completed within 30 minutes of an emergency requiring PA assembly and accountability.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>D. Emergency Response Facilities</u></p> <ol style="list-style-type: none"> 1. Demonstrate activation of the operational support center (OSC), and full functional operation of the TSC and EOF within 60 minutes declaration of Alert or higher emergency classification. <u>Performance Criterion:</u> <ol style="list-style-type: none"> a. The TSC, EOF and OSC are activated within about 60 minutes of the initial notification. 2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC and EOF as appropriate. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. Emergency equipment in the emergency response facilities as specified in emergency plan implementing procedures was available to emergency responders. b. The Security Force implements and follows applicable emergency plan implementing procedures. c. The Radiation Protection Coordinator implements designated responsibilities in accordance with emergency plan implementing procedures if an onsite/offsite release has occurred. 3. Demonstrate the adequacy of communications for all emergency support resources. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. Emergency response facility personnel are able to operate communication systems in accordance with emergency plan implementing procedures. b. Clear primary and backup communications links are established and maintained for the duration of the exercise.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>E. Radiological Assessment and Control</u></p> <ol style="list-style-type: none"> 1. Demonstrate the ability to obtain onsite radiological surveys and samples. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. Radiation Protection Technicians demonstrate the ability to obtain appropriate instruments (range and type) and perform surveys. b. Airborne samples are taken in accordance with emergency plan implementing procedures. 2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. Emergency workers are issued self reading dosimeters when radiation levels require, and exposures are controlled to 10 CFR Part 20 limits (unless the Emergency Director authorizes emergency limits). b. Exposure records are available c. Emergency workers include Security and personnel within all emergency facilities. 3. Demonstrate the ability to assemble and deploy field monitoring teams within 60 minutes from the decision to do so. <u>Performance Criterion:</u> <ol style="list-style-type: none"> a. One offsite Radiological Emergency Team (RET) is ready to be deployed within 15 - 30 minutes of their arrival. In addition, an offsite monitoring team must be able to be dispatched within 60 minutes of an Alert or higher emergency classification.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>E. Radiological Assessment and Control (continued)</u></p> <p>4. Demonstrate the ability to collect and disseminate field team data. <u>Performance Criteria:</u></p> <ul style="list-style-type: none"> a. RET collects data for dose rate and airborne radioactivity levels in accordance with emergency plan implementing procedures. b. RET communicates data to the TSC and/or EOF in accordance with emergency plan implementing procedures. <p>5. Demonstrate the ability to develop dose projections. <u>Performance Criterion:</u></p> <ul style="list-style-type: none"> a. Timely and accurate dose projections are performed in accordance with emergency plan implementing procedures. <p>6. Demonstrate the ability to make the decision whether to issue radioprotective drugs (KI) to onsite emergency workers. <u>Performance Criterion:</u></p> <ul style="list-style-type: none"> a. KI is taken (simulated) if the estimated dose to the thyroid will exceed 25 rem committed dose equivalent (CDE). <p>7. Demonstrate the ability to develop appropriate protective action recommendations (PARs) and notify appropriate authorities beginning no later than 15 minutes after development. <u>Performance Criteria:</u></p> <ul style="list-style-type: none"> a. Total effective dose equivalent (TEDE) and CDE dose projections from the dose assessment computer code are compared in accordance with emergency plan implementing procedures. b. PARs are developed no later than 15 minutes after data availability. c. PAR's are transmitted via voice or fax beginning no later than 15 minutes after event classification and/or PAR development.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>F. Public Information</u></p> <ol style="list-style-type: none"> 1. Demonstrate the capability to develop and disseminate clear, accurate, and timely information to the news media in accordance with emergency plan implementing procedures. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. The Joint Information Center (JIC) is activated within 60 minutes following the declaration of a Site Area Emergency or higher classification. b. Follow-up information is provided to the news media, during scheduled news conferences and media briefings. 2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. Calls are answered in a timely manner with the correct information, in accordance with emergency plan implementing procedures. b. Calls are returned or forwarded, as appropriate, to demonstrate responsiveness. c. Rumors are identified and addressed in accordance with emergency plan implementing procedures. <p><u>G. Evaluation</u></p> <ol style="list-style-type: none"> 1. Demonstrate the ability to conduct a post-exercise critique, to determine areas requiring improvement and corrective action. <u>Performance Criteria:</u> <ol style="list-style-type: none"> a. An exercise time line is developed, followed by an evaluation of the objectives. b. Significant problems in achieving the objectives are discussed to ensure understanding of why objectives were not fully achieved. c. Recommendations for improvement in non-objective areas are discussed.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>14.1.2.1 A report exists that confirms onsite emergency response personnel were mobilized to fill emergency response positions and there were no uncorrected onsite exercise deficiencies.</p> <p>14.1.2.2 A report exists that confirms onsite emergency response personnel performed their assigned responsibilities and there were no uncorrected onsite exercise deficiencies.</p> <p>14.1.3 A report exists that confirms the exercise is completed within the specified time periods of Appendix E to 10 CFR Part 50, offsite exercise objectives have been met, and there are either no uncorrected offsite exercise deficiencies or a license condition requires offsite deficiencies to be addressed prior to operation above 5% of rated power.</p>

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
15.0 Radiological Emergency Response Training			
10 CFR 50.47(b)(15) – Radiological emergency response training is provided to those who may be called upon to assist in an emergency.	15.1 Site-specific emergency response training has been provided for those who may be called upon to provide assistance in the event of an emergency. [O.1]	15.1 An inspection of training records will be performed.	15.1 Site-specific emergency response training has been provided for local fire departments, law enforcement, ambulance, and hospital personnel.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
16.0 Responsibility for the Planning Effort: Development, Periodic Review, and Distribution of the Plan			
10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.	16.1 The emergency response plans have been forwarded to all organizations and appropriate individuals with responsibility for implementation of the plans. [P.5]	16.1 An inspection of the distribution letter will be performed.	16.1 The Fermi 3 Emergency Plan has been forwarded to the Michigan State Police, Michigan Department of Environmental Quality, Monroe County Emergency Management, and Wayne County Emergency Management.

**Table 2.3-1
ITAAC For Emergency Planning**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
17.0 Implementing Procedures			
<p>10 CFR Part 50, App. E.V – No less than 180 days prior to the scheduled issuance of an operating license for a nuclear power reactor or a license to possess nuclear material, the applicant’s detailed implementing procedures for its emergency plan shall be submitted to the Commission.</p>	<p>17.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.</p>	<p>17.1 An inspection of the submittal letter will be performed.</p>	<p>17.1 Detroit Edison has submitted detailed implementing procedures for the onsite emergency plan to the NRC no less than 180 days prior to fuel load.</p>

2.4 SITE-SPECIFIC ITAAC

The Site Specific ITAAC are provided in the following sections. Site specific systems were evaluated against selection criteria in [FSAR Section 14.3](#). If a site-specific system described in the FSAR does not meet an ITAAC selection criterion, only the system name and the statement “No entry for this system” is provided.

2.4.1 ITAAC FOR BACKFILL UNDER CATEGORY I STRUCTURES

Not applicable since no compactable backfill will be placed under Fermi 3 Category I structures.

2.4.2 ITAAC FOR PLANT SERVICE WATER SYSTEM (PORTION OUTSIDE THE SCOPE OF THE CERTIFIED DESIGN)

Design Description

The Plant Service Water System (PSWS) is the heat sink for the Reactor Component Cooling Water System. The PSWS does not perform any safety-related function. There is no interface with any safety-related component.

The PSWS cooling towers and basins are not within the scope of the certified design. A specific design for this portion of the PSWS is described in [FSAR Subsection 9.2.1](#). Interface requirements are necessary for supporting the post-72-hour cooling function of the PSWS. The plant-specific portion of the PSWS shall meet the following interface requirement:

The volume of water shall be sufficient such that no active makeup shall be necessary to remove 2.02×10^7 MJ (1.92×10^{10} BTU) over a period of seven days. Additionally, the PSWS pumps must have sufficient available net positive suction head at the pump suction location for the lowest probable water level of the heat sink.

Inspections, Test, Analyses and Acceptance Criteria

[Table 2.4.2-1](#) provides a definition of the inspections, tests, and/or analyses, together with associated acceptance criteria for the PSWS.

**Table 2.4.2-1
ITAAC For Plant Service Water Reserve Storage Capacity**

Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
<p>1. The volume of water in the PSWS basin shall be sufficient such that:</p> <p>a. No active makeup shall be necessary to remove 2.02×10^7 MJ (1.92×10^{10} BTU) over a period of seven days.</p> <p>b. The PSWS pumps must have sufficient available net positive suction head at the pump suction location for the lowest probable water level of the heat sink.</p>	<p>a. Inspections and analysis will be performed of the PSWS basin and cooling towers.</p> <p>b. Inspections and analysis will be performed of the PSWS basin.</p>	<p>a. A report exists and concludes that the volume of water in the PSWS basin is sufficient such that no active makeup is necessary to remove 2.02×10^7 MJ (1.92×10^{10} BTU) over a period of seven days.</p> <p>b. A report exists and concludes that the PSWS pumps have sufficient available net positive suction head at the pump suction location for the lowest probable water level of the heat sink.</p>

2.4.3 CIRCULATING WATER SYSTEM (PORTION OUTSIDE THE SCOPE OF THE CERTIFIED DESIGN)

No entry for this system.

2.4.4 STATION WATER SYSTEM (INCLUDING INTAKE STRUCTURE AND SERVICING EQUIPMENT)

No entry for this system.

2.4.5 YARD FIRE PROTECTION SYSTEM (PORTIONS OUTSIDE SCOPE OF CERTIFIED DESIGN)

No entry for this system.

2.4.6 POTABLE & SANITARY WATER SYSTEMS

No entry for this system.

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2.4.7 OFFSITE POWER SYSTEMS

The offsite portion of the Preferred Power Supply (PPS) consists of at least two electrical circuits and associated equipment that are used to interconnect the offsite transmission system with the plant main generator and the onsite portions of the PPS. The PPS consists of the normal preferred and alternate preferred power sources and includes those portions of the offsite power system and the onsite power system required for power flow from the offsite transmission system to the safety-related Isolation Power Centers (IPC) incoming line breakers.

The interface between the normal preferred ESBWR certified plant onsite portion of the PPS and the site-specific offsite portion of the PPS is at the switchyard side terminals of the high side motor operated disconnects (MODs) of the unit auxiliary transformer (UAT) circuit breaker and main generator circuit breaker. The interface between the alternate preferred ESBWR certified plant onsite portion of the PPS and the site specific offsite portion of the PPS is at the switchyard side terminals of the reserve auxiliary transformer (RAT) high side MODs.

The as-built offsite portion of the PPS, from the transmission network to the interface with the onsite portions of the PPS, satisfies the applicable provisions of GDC 17. Specifically, the offsite portion of the PPS shall meet the following interface requirements:

1. At least two independent circuits supply electric power from the transmission network to the interface with the onsite portions of the PPS.
2. Each offsite circuit interfacing with the onsite portions of the PPS is adequately rated to supply the load requirements during design basis operating modes (refer to [DCD ITAAC 2.13.1-2](#), Item 9).
3. During steady state operation, the offsite portion of the PPS is capable of supplying voltage at the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.
4. During steady state operation, the offsite portion of the PPS is capable of supplying required frequency at the interface with the onsite portions of the PPS that will support operation of safety related loads during design basis operating modes.
5. The fault current contribution of the offsite portion of the PPS is compatible with the interrupting capability of the onsite fault current interrupting devices.

Inspection, Test, Analysis and Acceptance Criteria

[Table 2.4.7-1](#) provides a definition of the inspections, tests and/or analyses, together with associated acceptance criteria for the Offsite Power Systems.

Table 2.4.7-1 ITAAC for Offsite Power Systems

Design Commitment	Inspections, Tests, and Analysis	Acceptance Criteria
<p>1. Independent offsite power sources supply electric power from the transmission network to the interface with the onsite PPS.</p> <p>a. A minimum of two offsite power circuits are provided to the interface with the onsite PPS and are physically separate.</p> <p>b. The two offsite power circuits interfacing with the onsite PPS are electrically independent.</p> <p>c. The breaker control power, instrumentation, and control circuits for the two offsite Dower circuits interfacing with the onsite PPS are electrically independent.</p>	<p>a. Inspections of the as-built offsite power supply transmission system will be performed.</p> <p>b. Test of the as-built offsite power system will be conducted by providing a test signal in only one offsite power circuit at a time.</p> <p>c. Tests of the as-built offsite breaker control power, instrumentation, and control circuits will be conducted by providing a test signal in only one offsite power circuit at a time.</p>	<p>a. A report exists and concludes the following inspection results:</p> <ul style="list-style-type: none"> i) At least two offsite transmission circuits are provided to the interface with the onsite PPS. ii) The two offsite power circuits are physically separated by distance or physical barriers so as to minimize to the extent practical the likelihood of their simultaneous failure under design basis conditions. iii) The two offsite power circuits do not have a common takeoff structure or use a common structure for support. <p>b. A report exists and concludes that a test signal exists in only the circuit under test.</p> <p>c. A report exists and concludes that a test signal exists in only the circuit under test.</p>
<p>2. At least two offsite power circuits interfacing with the onsite portions of the PPS are each adequately rated to supply necessary load requirements during design basis operating modes.</p>	<p>2. Analyses of the offsite power system will be performed to evaluate the as-built ratings of each offsite power circuit interfacing with the onsite portions of the PPS against the load requirements determined in DCD ITAAC 2.13.1-2, Item, 9.</p>	<p>2. A report exists and concludes that at least two offsite power circuits from the transmission network up to the interface with the onsite portions of the PPS are each rated to supply the load requirements, during design basis operating modes, of their respective safety-related and nonsafety-related load groups.</p>
<p>3. Under normal steady state operation of the transmission system, the offsite portion of the PPS is capable of supplying required voltage to the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.</p>	<p>3. Analyses of the as-built offsite portion of the PPS will be performed to evaluate the capability of each offsite power circuit to supply the voltage requirements at the interface with the onsite portion of the PPS determined in DCD ITAAC 2.13.1-2, Item 9.</p>	<p>3. A report exists and concludes that as-built offsite portion of the PPS, under normal steady state operation of the transmission system, is capable of supplying voltage at the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.</p>

Table 2.4.7-1 ITAAC for Offsite Power Systems

Design Commitment	Inspections, Tests, and Analysis	Acceptance Criteria
<p>4. Under normal steady state operation of the transmission system, the offsite portion of the PPS is capable of supplying required frequency to the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.</p>	<p>4. Analyses of the as-built offsite portion of the PPS will be performed to evaluate the capability of each offsite power circuit to supply the frequency requirements at the interface with the onsite portions of the PPS determined in DCD ITAAC 2.13.1-2, Item 9.</p>	<p>4. A report exists and concludes that as-built offsite portion of the PPS, under normal steady state operation of the transmission system, is capable of supplying required frequency at the interface with the onsite portions of the PPS that will support operation of safety-related loads during design basis operating modes.</p>
<p>5. The fault current contribution of the offsite portion of the PPS is compatible with the interrupting capability of the onsite short circuit interrupting devices.</p>	<p>5. Analyses of the as-built offsite portion of the PPS will be performed to evaluate the fault current contribution of each offsite power circuit at the interface with the onsite portions of the PPS.</p>	<p>5. A report exists and concludes the short circuit contribution of the as-built offsite portion of the PPS at the interface with the onsite portions of the PPS is compatible with the interrupting capability of the onsite fault current interrupting devices as determined in DCD ITAAC 2.13.1-2, Item 10.</p>

2.4.8 COMMUNICATIONS SYSTEMS (EMERGENCY NOTIFICATION SYSTEM)

Addressed in [Table 2.3-1, Topic 6.0, Emergency Communications](#).

2.4.9 MAKEUP WATER SYSTEM

No entry for this system.

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2.4.10 (Deleted)

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2.4.11 (Deleted)

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2.4.12 HYDROGEN WATER CHEMISTRY SYSTEM

No entry for this system.

2.4.13 METEOROLOGICAL MONITORING SYSTEM

No entry for this system.