

ACTIONS

-----NOTE-----

LCO 3.0.4.b is not applicable to DGs.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One required offsite circuit inoperable.</p>	<p>A.1 -----NOTE----- Not applicable if a required Unit 2 offsite circuit is inoperable.</p> <hr/> <p>Perform SR 3.8.1.1 for required OPERABLE offsite circuit.</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p>
	<p><u>AND</u></p> <p>A.2 Declare required feature(s) with no offsite power available inoperable when its redundant required feature(s) is inoperable.</p>	<p>24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)</p>
	<p><u>AND</u></p> <p>A.3 Restore required offsite circuit to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p>
		<p>17 days from discovery of failure to meet LCO 3.8.1.a or b</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One required DG inoperable.</p>	<p>B.1 Verify both supplemental diesel generators are available.</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 12 hours thereafter</p>
	<p><u>AND</u></p>	
	<p>B.2 <del>NOTE</del> Not applicable if a required Unit 2 DG is inoperable.</p>	
	<p>Perform SR 3.8.1.1 for the required offsite circuit(s).</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p>
	<p><u>AND</u></p>	
	<p>B.3 Declare required feature(s) supported by the inoperable DG inoperable when its required redundant feature(s) is inoperable.</p>	<p>4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p>
<p><u>AND</u></p>	<p>B.4.1 Determine OPERABLE DG(s) is not inoperable due to common cause failure.</p>	<p>24 hours</p>
<p><u>OR</u></p>		
	<p>B.4.2 Perform SR 3.8.1.2 for OPERABLE DG(s).</p>	<p>24 hours</p>
<p><u>AND</u></p>		

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>B.5 Restore required DG to OPERABLE status.</p>	<p>14 days</p> <p><u>AND</u></p> <p>17 days from discovery of failure to meet LCO 3.8.1.a or b</p>
<p>C. Required Action and associated Completion Time of Required Action B.1 not met.</p>	<p>C.1 Restore both supplemental diesel generators to available status.</p> <p><u>OR</u></p> <p>C.2 Restore required DG to OPERABLE status.</p>	<p>72 hours</p> <p>72 hours</p>
<p>D. Two required offsite circuits inoperable.</p>	<p>D.1 Declare required feature(s) inoperable when its redundant required feature(s) is inoperable.</p> <p><u>AND</u></p> <p>D.2 Restore one required offsite circuit to OPERABLE status.</p>	<p>12 hours from discovery of Condition D concurrent with inoperability of redundant required features</p> <p>24 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>E. One required offsite circuit inoperable.</p> <p><u>AND</u></p> <p>One required DG inoperable.</p>	<p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating," when Condition E is entered with no AC power source to any train. -----</p> <p>E.1 Restore required offsite circuit to OPERABLE status.</p> <p><u>OR</u></p> <p>E.2 Restore required DG to OPERABLE status.</p>	<p>12 hours</p> <p>12 hours</p>
<p>F. Two required DGs inoperable.</p>	<p>F.1 Restore one required DG to OPERABLE status.</p>	<p>2 hours</p>
<p>G. Required Action and associated Completion Time of Condition A, C, D, E, or F not met.</p> <p><u>OR</u></p> <p>Required Action and Associated Completion Time of Required Action B.2, B.3, B.4.1, B.4.2, or B.5 not met.</p>	<p>G.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>G.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>
<p>H. Three or more required AC sources inoperable.</p>	<p>H.1 Enter LCO 3.0.3.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

-----NOTES-----

1. SR 3.8.1.1 through SR 3.8.1.22 are applicable only to the AC electrical power sources for Unit 1.
2. SR 3.8.1.23 is applicable only to the Unit 2 required AC electrical power sources. The Surveillances referenced in SR 3.8.1.23 are the Unit 2 Surveillance Requirements.

SURVEILLANCE		FREQUENCY
SR 3.8.1.1	Verify correct breaker alignment and indicated power availability for each offsite circuit.	7 days
SR 3.8.1.2	<p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading.</li> <li>2. A modified DG start involving gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.8 must be met.</li> </ol> <p>-----</p> <p>Verify each DG starts from standby conditions and achieves steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V, and frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz.</p>	31 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. DG loadings may include gradual loading as recommended by the manufacturer.</li> <li>2. Momentary transients outside the load range do not invalidate this test.</li> <li>3. This Surveillance shall be conducted on only one DG at a time.</li> <li>4. This SR shall be preceded by and immediately follow without shutdown a successful performance of SR 3.8.1.2 or SR 3.8.1.8.</li> </ol> <p>-----</p> <p>Verify each DG is synchronized and loaded and operates for <math>\geq 60</math> minutes at a load <math>\geq 3150</math> kW and <math>\leq 3500</math> kW.</p>	31 days
SR 3.8.1.4	Verify each day tank contains $\geq 101.4$ gal of fuel oil.	31 days
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	31 days
SR 3.8.1.6	Verify each required DG air start receiver pressure is $\geq 190$ psig.	31 days
SR 3.8.1.7	Verify each fuel oil transfer system operates to automatically transfer fuel oil from the storage tank to the day tank.	92 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.8</p> <p>-----NOTE----- All DG starts may be preceded by an engine prelube period.</p> <p>-----</p> <p>Verify each DG starts from standby condition and achieves:</p> <ul style="list-style-type: none"> <li>a. In <math>\leq 10</math> seconds, voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz; and</li> <li>b. Steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V, and frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz.</li> </ul>	<p>184 days</p>
<p>SR 3.8.1.9</p> <p>-----NOTE----- SR 3.8.1.9.a is only required to be met when the auxiliary source is supplying the electrical power distribution subsystem.</p> <p>-----</p> <p>Verify:</p> <ul style="list-style-type: none"> <li>a. Automatic transfer from the auxiliary source to the preferred offsite circuit; and</li> <li>b. Manual alignment to the alternate offsite circuit.</li> </ul>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.10</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> <li>2. If performed with the DG synchronized with offsite power, it shall be performed at a power factor <math>\leq 0.86</math>. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable.</li> </ol> <p>-----</p> <p>Verify each DG rejects a load greater than or equal to its associated single largest post-accident load, and:</p> <ol style="list-style-type: none"> <li>a. Following load rejection, the frequency is <math>\leq 64.4</math> Hz;</li> <li>b. Within 2 seconds following load rejection, the voltage is <math>\geq 3910</math> V and <math>\leq 4400</math> V; and</li> <li>c. Within 2 seconds following load rejection, the frequency is <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz.</li> </ol>	<p>24 months</p>



SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.11</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> <li>2. If performed with DG synchronized with offsite power, it shall be performed at a power factor <math>\leq 0.86</math>. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable.</li> </ol> <p>-----</p> <p>Verify each DG does not trip and voltage is maintained <math>\leq 5000</math> V during and following a load rejection of <math>\geq 3150</math> kW and <math>\leq 3500</math> kW.</p>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.12</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period.</li> <li>2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> </ol> <p>-----</p> <p>Verify on an actual or simulated loss of offsite power signal:</p> <ol style="list-style-type: none"> <li>a. De-energization of emergency buses;</li> <li>b. Load shedding from emergency buses;</li> <li>c. DG auto-starts from standby condition and:               <ol style="list-style-type: none"> <li>1. Energizes permanently connected loads in <math>\leq 10</math> seconds;</li> <li>2. Energizes auto-connected shutdown loads through time delay relays, where applicable;</li> <li>3. Maintains steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V;</li> <li>4. Maintains steady state frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz; and</li> <li>5. Supplies permanently connected and auto-connected shutdown loads for <math>\geq 5</math> minutes.</li> </ol> </li> </ol>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.13</p> <hr/> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period.</li> <li>2. This Surveillance shall not normally be performed in MODE 1 or 2. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> </ol> <hr/> <p>Verify on an actual or simulated Engineered Safety Feature (ESF) actuation signal each DG auto-starts from standby condition and:</p> <ol style="list-style-type: none"> <li>a. In <math>\leq 10</math> seconds achieves voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz;</li> <li>b. Achieves steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V and frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz;</li> <li>c. Operates for <math>\geq 5</math> minutes;</li> <li>d. Permanently connected loads remain energized from the offsite power system; and</li> <li>e. Emergency loads are auto-connected through the time delay relays, where applicable, from the offsite power system.</li> </ol>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.14</p> <p style="text-align: center;">-----NOTE-----</p> <p>This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</p> <hr/> <p>Verify each DG's automatic trips are bypassed on an actual or simulated loss of voltage signal on the emergency bus or an actual or simulated ESF actuation signal except:</p> <ul style="list-style-type: none"> <li>a. Engine overspeed; and</li> <li>b. Generator differential current.</li> </ul>	<p>24 months</p>
<p>SR 3.8.1.15</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. Momentary transients outside the load and power factor ranges do not invalidate this test.</li> <li>2. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> <li>3. If performed with DG synchronized with offsite power, it shall be performed at a power factor <math>\leq 0.86</math>. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable.</li> </ol> <hr/> <p>Verify each DG operates for <math>\geq 8</math> hours at a load <math>\geq 3150</math> kW and <math>\leq 3500</math> kW.</p>	<p>24 months</p>

**SURVEILLANCE REQUIREMENTS (continued)**

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.16</p> <p style="text-align: center;">-----NOTES-----</p> <p>1. This Surveillance shall be performed within 5 minutes of shutting down the DG after the DG has operated <math>\geq 2</math> hours loaded <math>\geq 3150</math> kW and <math>\leq 3500</math> kW.</p> <p style="padding-left: 40px;">Momentary transients outside of load range do not invalidate this test.</p> <p>2. All DG starts may be preceded by an engine prelube period.</p> <p style="text-align: center;">-----</p> <p>Verify each DG starts and achieves:</p> <p>a. In <math>\leq 10</math> seconds, voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz; and</p> <p>b. Steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V and frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz.</p>	<p>24 months</p>
<p>SR 3.8.1.17</p> <p style="text-align: center;">-----NOTE-----</p> <p>This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</p> <p style="text-align: center;">-----</p> <p>Verify each DG:</p> <p>a. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power;</p> <p>b. Transfers loads to offsite power source; and</p> <p>c. Returns to ready-to-load operation.</p>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.18</p> <p style="text-align: center;">-----NOTE-----</p> <p>This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</p> <p>-----</p> <p>Verify that the automatic sequence timing relays are OPERABLE with each load sequence time within <math>\pm 5\%</math> of its required value and that each load is sequenced on within the design allowable time limit.</p>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.19</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period.</li> <li>2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> </ol> <hr/> <p>Verify on an actual or simulated loss of offsite power signal in conjunction with an actual or simulated ESF actuation signal:</p> <ol style="list-style-type: none"> <li>a. De-energization of emergency buses;</li> <li>b. Load shedding from emergency buses; and</li> <li>c. DG auto-starts from standby condition and:               <ol style="list-style-type: none"> <li>1. Energizes permanently connected loads in <math>\leq 10</math> seconds;</li> <li>2. Energizes auto-connected emergency loads through time delay relays, as applicable;</li> <li>3. Achieves steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V;</li> <li>4. Achieves steady state frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz; and</li> <li>5. Supplies permanently connected and auto-connected emergency loads for <math>\geq 5</math> minutes.</li> </ol> </li> </ol>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.20</p> <p style="text-align: center;">-----NOTE-----</p> <ol style="list-style-type: none"> <li>1. This SR is only required to be met when the applicable DG is connected to its load test resistor bank.</li> <li>2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> </ol> <p>-----</p> <p>Verify, with a DG operating in test mode and connected to its load test resistor bank, an actual or simulated ESF actuation signal overrides the test mode by:</p> <ol style="list-style-type: none"> <li>a. Returning DG to ready-to-load operation; and</li> <li>b. Verifying the emergency loads are serviced by offsite power.</li> </ol>	<p>24 months</p>
<p>SR 3.8.1.21</p> <p style="text-align: center;">-----NOTE-----</p> <p>This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</p> <p>-----</p> <p>Verify, with a DG operating in test mode and connected to its bus, an actual or simulated ESF actuation signal overrides the test mode by:</p> <ol style="list-style-type: none"> <li>a. Returning DG to ready-to-load operation; and</li> <li>b. Verifying the emergency loads are serviced by offsite power.</li> </ol>	<p>24 months</p>



SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.22</p> <p style="text-align: center;">-----NOTE-----</p> <p>All DG starts may be preceded by an engine prelube period.</p> <p style="text-align: center;">-----</p> <p>Verify when started simultaneously from standby condition, each DG achieves, in <math>\leq 10</math> seconds, voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz.</p>	<p>10 years</p>
<p>SR 3.8.1.23</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. When Unit 2 is in MODE 5 or 6, or moving irradiated fuel assemblies in the containment or auxiliary building, the following Unit 2 SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10, SR 3.8.1.11, SR 3.8.1.12, SR 3.8.1.15, SR 3.8.1.16, SR 3.8.1.17, and SR 3.8.1.18.</li> <li>2. Unit 2 SR 3.8.1.9.a is only required to be met when the auxiliary source is supplying the required Unit 2 electrical power distribution subsystem.</li> </ol> <p style="text-align: center;">-----</p> <p>For required Unit 2 AC sources, the SRs of Unit 2 Specification 3.8.1, except SR 3.8.1.9.b, SR 3.8.1.13, SR 3.8.1.14 (ESF actuation signal portion only), SR 3.8.1.19, SR 3.8.1.20, SR 3.8.1.21, and SR 3.8.1.22, are applicable.</p>	<p>In accordance with applicable SRs</p>

ACTIONS

-----NOTE-----

LCO 3.0.4.b is not applicable to DGs.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One required offsite circuit inoperable.</p>	<p>A.1 -----NOTE----- Not applicable if a required Unit 1 offsite circuit is inoperable. ----- Perform SR 3.8.1.1 for required OPERABLE offsite circuit.</p>	<p>1 hour <u>AND</u> Once per 8 hours thereafter</p>
	<p><u>AND</u> A.2 Declare required feature(s) with no offsite power available inoperable when its redundant required feature(s) is inoperable.</p>	<p>24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)</p>
	<p><u>AND</u> A.3 Restore required offsite circuit to OPERABLE status.</p>	<p>72 hours <u>AND</u> 17 days from discovery of failure to meet LCO 3.8.1.a or b</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One required DG inoperable.</p>	<p>B.1 Verify both supplemental diesel generators are available.</p>	<p>1 hour <u>AND</u> Once per 12 hours thereafter</p>
	<p><u>AND</u></p>	
	<p>B.2 <del>-----NOTE-----</del> Not applicable if a required Unit 1 DG is inoperable. <del>-----</del></p>	
	<p>Perform SR 3.8.1.1 for the required offsite circuit(s).</p>	<p>1 hour <u>AND</u> Once per 8 hours thereafter</p>
	<p><u>AND</u></p>	
	<p>B.3 Declare required feature(s) supported by the inoperable DG inoperable when its required redundant feature(s) is inoperable.</p>	<p>4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p>
	<p><u>AND</u></p>	
	<p>B.4.1 Determine OPERABLE DG(s) is not inoperable due to common cause failure.</p> <p><u>OR</u></p> <p>B.4.2 Perform SR 3.8.1.2 for OPERABLE DG(s).</p> <p><u>AND</u></p>	<p>24 hours</p> <p>24 hours</p>

**ACTIONS (continued)**

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>B.5 Restore required DG to OPERABLE status.</p>	<p>14 days</p> <p><u>AND</u></p> <p>17 days from discovery of failure to meet LCO 3.8.1.a or b</p>
<p>C. Required Action and associated Completion Time of Required Action B.1 not met.</p>	<p>C.1 Restore both supplemental diesel generators to available status.</p> <p><u>OR</u></p> <p>C.2 Restore required DG to OPERABLE status.</p>	<p>72 hours</p> <p>72 hours</p>
<p>D. Two required offsite circuits inoperable.</p>	<p>D.1 Declare required feature(s) inoperable when its redundant required feature(s) is inoperable.</p> <p><u>AND</u></p> <p>D.2 Restore one required offsite circuit to OPERABLE status.</p>	<p>12 hours from discovery of Condition D concurrent with inoperability of redundant required features</p> <p>24 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>E. One required offsite circuit inoperable.</p> <p><u>AND</u></p> <p>One required DG inoperable.</p>	<p>-----NOTE-----</p> <p>Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating," when Condition E is entered with no AC power source to any train.</p> <hr/> <p>E.1 Restore required offsite circuit to OPERABLE status.</p> <p><u>OR</u></p> <p>E.2 Restore required DG to OPERABLE status.</p>	<p>12 hours</p> <p>12 hours</p>
<p>F. Two required DGs inoperable.</p>	<p>F.1 Restore one required DG to OPERABLE status.</p>	<p>2 hours</p>
<p>G. Required Action and associated Completion Time of Condition A, C, D, E, or F not met.</p> <p><u>OR</u></p> <p>Required Action and Associated Completion Time of Required Action B.2, B.3, B.4.1, B.4.2, or B.5 not met.</p>	<p>G.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>G.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>
<p>H. Three or more required AC sources inoperable.</p>	<p>H.1 Enter LCO 3.0.3.</p>	<p>Immediately</p>

**SURVEILLANCE REQUIREMENTS**

**NOTES**

1. SR 3.8.1.1 through SR 3.8.1.22 are applicable only to the AC electrical power sources for Unit 2.
2. SR 3.8.1.23 is applicable only to the Unit 1 required AC electrical power sources. The Surveillances referenced in SR 3.8.1.23 are the Unit 1 Surveillance Requirements.

SURVEILLANCE		FREQUENCY
SR 3.8.1.1	Verify correct breaker alignment and indicated power availability for each offsite circuit.	7 days
SR 3.8.1.2	<p><b>NOTES</b></p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading.</li> <li>2. A modified DG start involving gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.8 must be met.</li> </ol> <p>Verify each DG starts from standby conditions and achieves steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V, and frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz.</p>	31 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. DG loadings may include gradual loading as recommended by the manufacturer.</li> <li>2. Momentary transients outside the load range do not invalidate this test.</li> <li>3. This Surveillance shall be conducted on only one DG at a time.</li> <li>4. This SR shall be preceded by and immediately follow without shutdown a successful performance of SR 3.8.1.2 or SR 3.8.1.8.</li> </ol> <p>-----</p> <p>Verify each DG is synchronized and loaded and operates for <math>\geq 60</math> minutes at a load <math>\geq 3150</math> kW and <math>\leq 3500</math> kW.</p>	31 days
SR 3.8.1.4	Verify each day tank contains $\geq 101.4$ gal of fuel oil.	31 days
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	31 days
SR 3.8.1.6	Verify each required DG air start receiver pressure is $\geq 190$ psig.	31 days
SR 3.8.1.7	Verify each fuel oil transfer system operates to automatically transfer fuel oil from the storage tank to the day tank.	92 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.8</p> <p>-----NOTE----- All DG starts may be preceded by an engine prelube period.</p> <p>-----</p> <p>Verify each DG starts from standby condition and achieves:</p> <p>a. In <math>\leq 10</math> seconds, voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz; and</p> <p>b. Steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V, and frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz.</p>	<p>184 days</p>
<p>SR 3.8.1.9</p> <p>-----NOTE----- SR 3.8.1.9.a is only required to be met when the auxiliary source is supplying the electrical power distribution subsystem.</p> <p>-----</p> <p>Verify:</p> <p>a. Automatic transfer from the auxiliary source to the preferred offsite circuit; and</p> <p>b. Manual alignment to the alternate offsite circuit.</p>	<p>24 months</p>



SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.10</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> <li>2. If performed with the DG synchronized with offsite power, it shall be performed at a power factor <math>\leq 0.86</math>. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable.</li> </ol> <p>-----</p> <p>Verify each DG rejects a load greater than or equal to its associated single largest post-accident load, and:</p> <ol style="list-style-type: none"> <li>a. Following load rejection, the frequency is <math>\leq 64.4</math> Hz;</li> <li>b. Within 2 seconds following load rejection, the voltage is <math>\geq 3910</math> V and <math>\leq 4400</math> V; and</li> <li>c. Within 2 seconds following load rejection, the frequency is <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz.</li> </ol>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.11</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> <li>2. If performed with DG synchronized with offsite power, it shall be performed at a power factor <math>\leq 0.86</math>. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable.</li> </ol> <p>-----</p> <p>Verify each DG does not trip and voltage is maintained <math>\leq 5000</math> V during and following a load rejection of <math>\geq 3150</math> kW and <math>\leq 3500</math> kW.</p>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.12</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period.</li> <li>2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> </ol> <hr/> <p>Verify on an actual or simulated loss of offsite power signal:</p> <ol style="list-style-type: none"> <li>a. De-energization of emergency buses;</li> <li>b. Load shedding from emergency buses;</li> <li>c. DG auto-starts from standby condition and:               <ol style="list-style-type: none"> <li>1. Energizes permanently connected loads in <math>\leq 10</math> seconds;</li> <li>2. Energizes auto-connected shutdown loads through time delay relays, where applicable;</li> <li>3. Maintains steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V;</li> <li>4. Maintains steady state frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz; and</li> <li>5. Supplies permanently connected and auto-connected shutdown loads for <math>\geq 5</math> minutes.</li> </ol> </li> </ol>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.13</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period.</li> <li>2. This Surveillance shall not normally be performed in MODE 1 or 2. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> </ol> <hr/> <p>Verify on an actual or simulated Engineered Safety Feature (ESF) actuation signal each DG auto-starts from standby condition and:</p> <ol style="list-style-type: none"> <li>a. In <math>\leq 10</math> seconds achieves voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz;</li> <li>b. Achieves steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V and frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz;</li> <li>c. Operates for <math>\geq 5</math> minutes;</li> <li>d. Permanently connected loads remain energized from the offsite power system; and</li> <li>e. Emergency loads are auto-connected through the time delay relays, where applicable, from the offsite power system.</li> </ol>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.14</p> <p>-----NOTE-----  This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</p> <p>-----</p> <p>Verify each DG's automatic trips are bypassed on an actual or simulated loss of voltage signal on the emergency bus or an actual or simulated ESF actuation signal except:</p> <ul style="list-style-type: none"> <li>a. Engine overspeed; and</li> <li>b. Generator differential current.</li> </ul>	<p>24 months</p>
<p>SR 3.8.1.15</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. Momentary transients outside the load and power factor ranges do not invalidate this test.</li> <li>2. This Surveillance shall not normally be performed in MODE 1 or 2. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> <li>3. If performed with DG synchronized with offsite power, it shall be performed at a power factor <math>\leq 0.86</math>. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable.</li> </ol> <p>-----</p> <p>Verify each DG operates for <math>\geq 8</math> hours at a load <math>\geq 3150</math> kW and <math>\leq 3500</math> kW.</p>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.16</p> <p style="text-align: center;">-----NOTES-----</p> <p>1. This Surveillance shall be performed within 5 minutes of shutting down the DG after the DG has operated <math>\geq 2</math> hours loaded <math>\geq 3150</math> kW and <math>\leq 3500</math> kW.</p> <p style="padding-left: 40px;">Momentary transients outside of load range do not invalidate this test.</p> <p>2. All DG starts may be preceded by an engine prelube period.</p> <p style="text-align: center;">-----</p> <p>Verify each DG starts and achieves:</p> <p>a. In <math>\leq 10</math> seconds, voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz; and</p> <p>b. Steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V and frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz.</p>	<p>24 months</p>
<p>SR 3.8.1.17</p> <p style="text-align: center;">-----NOTE-----</p> <p>This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</p> <p style="text-align: center;">-----</p> <p>Verify each DG:</p> <p>a. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power;</p> <p>b. Transfers loads to offsite power source; and</p> <p>c. Returns to ready-to-load operation.</p>	<p>24 months</p>

**SURVEILLANCE REQUIREMENTS (continued)**

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.18</p> <p>-----NOTE-----            This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, this Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</p> <hr/> <p>Verify that the automatic sequence timing relays are OPERABLE with each load sequence time within <math>\pm 5\%</math> of its required value and that each load is sequenced on within the design allowable time limit.</p>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.19</p> <p style="text-align: center;">-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period.</li> <li>2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> </ol> <p>-----</p> <p>Verify on an actual or simulated loss of offsite power signal in conjunction with an actual or simulated ESF actuation signal:</p> <ol style="list-style-type: none"> <li>a. De-energization of emergency buses;</li> <li>b. Load shedding from emergency buses; and</li> <li>c. DG auto-starts from standby condition and:               <ol style="list-style-type: none"> <li>1. Energizes permanently connected loads in <math>\leq 10</math> seconds;</li> <li>2. Energizes auto-connected emergency loads through time delay relays, as applicable;</li> <li>3. Achieves steady state voltage <math>\geq 3910</math> V and <math>\leq 4400</math> V;</li> <li>4. Achieves steady state frequency <math>\geq 59.4</math> Hz and <math>\leq 61.2</math> Hz; and</li> <li>5. Supplies permanently connected and auto-connected emergency loads for <math>\geq 5</math> minutes.</li> </ol> </li> </ol>	<p>24 months</p>



SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.20</p> <p style="text-align: center;">-----NOTE-----</p> <ol style="list-style-type: none"> <li>1. This SR is only required to be met when the applicable DG is connected to its load test resistor bank.</li> <li>2. This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</li> </ol> <p>-----</p> <p>Verify, with a DG operating in test mode and connected to its load test resistor bank, an actual or simulated ESF actuation signal overrides the test mode by:</p> <ol style="list-style-type: none"> <li>a. Returning DG to ready-to-load operation; and</li> <li>b. Verifying the emergency loads are serviced by offsite power.</li> </ol>	<p>24 months</p>
<p>SR 3.8.1.21</p> <p style="text-align: center;">-----NOTE-----</p> <p>This Surveillance shall not normally be performed in MODE 1, 2, 3, or 4. However, portions of the Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the unit is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.</p> <p>-----</p> <p>Verify, with a DG operating in test mode and connected to its bus, an actual or simulated ESF actuation signal overrides the test mode by:</p> <ol style="list-style-type: none"> <li>a. Returning DG to ready-to-load operation; and</li> <li>b. Verifying the emergency loads are serviced by offsite power.</li> </ol>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.22</p> <p>-----NOTE----- All DG starts may be preceded by an engine prelube period.</p> <p>-----</p> <p>Verify when started simultaneously from standby condition, each DG achieves, in <math>\leq 10</math> seconds, voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz.</p>	<p>10 years</p>
<p>SR 3.8.1.23</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. When Unit 1 is in MODE 5 or 6, or moving irradiated fuel assemblies in the containment or auxiliary building, the following Unit 1 SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10, SR 3.8.1.11, SR 3.8.1.12, SR 3.8.1.15, SR 3.8.1.16, SR 3.8.1.17, and SR 3.8.1.18.</li> <li>2. Unit 1 SR 3.8.1.9.a is only required to be met when the auxiliary source is supplying the required Unit 1 electrical power distribution subsystem.</li> </ol> <p>-----</p> <p>For required Unit 1 AC sources, the SRs of Unit 1 Specification 3.8.1, except SR 3.8.1.9.b, SR 3.8.1.13, SR 3.8.1.14 (ESF actuation signal portion only), SR 3.8.1.19, SR 3.8.1.20, SR 3.8.1.21, and SR 3.8.1.22, are applicable.</p>	<p>In accordance with applicable SRs</p>