

NEI 99-01 Rev 6	Proposed EAL	Justification										
<p style="text-align: right;"><b>AG1</b></p> <p><b>Initiating Condition – GENERAL EMERGENCY</b></p> <p>Release of gaseous radioactivity resulting in offsite dose greater than 1,000 mrem TEDE or 5,000 mrem thyroid CDE.</p> <p><b>Operating Mode Applicability:</b> All</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3)</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>The Emergency Director should declare the General Emergency promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</li> <li>If an ongoing release is detected and the release start time is unknown, assume that the release duration has exceeded 15 minutes.</li> <li>If the effluent flow past an effluent monitor is known to have stopped due to actions to isolate the release path, then the effluent monitor reading is no longer valid for classification purposes.</li> <li>The pre-calculated effluent monitor values presented in EAL #1 should be used for emergency classification assessments until the results from a dose assessment using actual meteorology are available.</li> </ul> <ol style="list-style-type: none"> <li>Reading on ANY of the following radiation monitors greater than the reading shown for 15 minutes or longer:  (site specific monitor list and threshold values)</li> <li>Dose assessment using actual meteorology indicates doses greater than 1,000 mrem TEDE or ,5000 mrem thyroid CDE at or beyond (site specific dose receptor point)</li> <li>Field survey results indicate <b>EITHER</b> of the following at or beyond (site specific dose receptor point): <ul style="list-style-type: none"> <li>Closed window dose rates greater than 1,000 mR/hr expected to continue for 60 minutes or longer.</li> <li>Analyses of field survey samples indicate thyroid CDE greater than 5000 mrem for one hour of inhalation.</li> </ul> </li> </ol>	<p style="text-align: right;"><b>RG1</b></p> <p><b>Initiating Condition:</b></p> <p>Release of gaseous radioactivity resulting in offsite dose greater than 1,000 mRem TEDE or 5,000 mRem thyroid CDE.</p> <p><b>Operating Mode Applicability:</b> 1,2,3,4,5,6,D</p> <p><b>Emergency Action Levels (EAL) :</b></p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</li> <li>If an ongoing release is detected and the release start time is unknown, assume that the release duration has exceeded 15 minutes.</li> <li>Classification based on effluent monitor readings assumes that a release path to the environment is established. 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Each of these points employs a normal and high range noble gas monitor.</p> <ul style="list-style-type: none"> <li>Plant Vent (R-14 and R-14A)</li> <li>Containment Shutdown Purge (R-12 and R-12A) (Modes 5,6 and D)*</li> <li>Condenser Air Ejector (R-15 and R-48)</li> </ul> <p>* The containment shutdown purge is normally only available in Modes 5, 6 and D</p> <p>For RA1.1, RS1.1 and RG1.1, monitors (R-14A, R-12A and R-48) are used in this calculation. Monitors (R-14A and R-15) will be used in the RU1.2 threshold.</p> <p>The air ejector noble gas high range monitor (R-48) is used as the effluent monitor since it is the last monitor in line prior to release to the environment. Should there be a primary to secondary leak where the Steam Generator is isolated and is releasing steam through its atmospheric relief valves then this condition will be bound by the Fission Product Barrier Loss and Potential Loss of Reactor Coolant System and Containment. 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<p style="text-align: right;"><b>AS1</b></p> <p><b>Initiating Condition – SITE AREA EMERGENCY</b></p> <p>Release of gaseous radioactivity resulting in offsite dose greater than 100 mrem TEDE or 500 mrem thyroid CDE.</p> <p><b>Operating Mode Applicability:</b> All</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3)</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>The Emergency Director should declare the Site Area Emergency promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</li> <li>If an ongoing release is detected and the release start time is unknown, assume that the release duration has exceeded 15 minutes.</li> <li>If the effluent flow past an effluent monitor is known to have stopped due to actions to isolate the release path, then the effluent monitor reading is no longer valid for classification purposes.</li> <li>The pre-calculated effluent monitor values presented in EAL #1 should be used for emergency classification assessments until the results from a dose assessment using actual meteorology are available.</li> </ul> <ol style="list-style-type: none"> <li>Reading on ANY of the following radiation monitors greater than the reading shown for 15 minutes or longer:  (site specific monitor list and threshold values)</li> <li>Dose assessment using actual meteorology indicates doses greater than 100 mrem TEDE or 500 mrem thyroid CDE at or beyond (site specific dose receptor point)</li> <li>Field survey results indicate <b>EITHER</b> of the following at or beyond (site specific dose receptor point): <ul style="list-style-type: none"> <li>Closed window dose rates greater than 100 mR/hr expected to continue for 60 minutes or longer.</li> <li>Analyses of field survey samples indicate thyroid CDE greater than 500 mrem for one hour of inhalation.</li> </ul> </li> </ol>	<p style="text-align: right;"><b>RS1</b></p> <p><b>Initiating Condition:</b></p> <p>Release of gaseous radioactivity resulting in offsite dose greater than 100 mRem TEDE or 500 mRem thyroid CDE.</p> <p><b>Operating Mode Applicability:</b> 1,2,3,4,5,6,D</p> <p><b>Emergency Action Levels (EAL) :</b></p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</li> <li>If an ongoing release is detected and the release start time is unknown, assume that the release duration has exceeded 15 minutes.</li> <li>Classification based on effluent monitor readings assumes that a release path to the environment is established. 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<p style="text-align: right;"><b>AA1</b></p> <p><b>Initiating Condition – ALERT</b></p> <p>Release of gaseous or liquid radioactivity resulting in offsite dose greater than 10 mrem TEDE or 50 mrem thyroid CDE.</p> <p><b>Operating Mode Applicability:</b> All</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3 or 4)</p> <p>Note:</p> <ul style="list-style-type: none"> <li>The Emergency Director should declare the Alert promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</li> <li>If an ongoing release is detected and the release start time is unknown, assume that the release duration has exceeded 15 minutes.</li> <li>If the effluent flow past an effluent monitor is known to have stopped due to actions to isolate the release path, then the effluent monitor reading is no longer valid for classification purposes.</li> <li>The pre-calculated effluent monitor values presented in EAL #1 should be used for emergency classification assessments until the results from a dose assessment using actual meteorology are available.</li> </ul> <ol style="list-style-type: none"> <li>Reading on ANY of the following radiation monitors greater than the reading shown for 15 minutes or longer:  (site-specific monitor list and threshold values)</li> <li>Dose assessment using actual meteorology indicates doses greater than 10 mrem TEDE or 50 mrem thyroid CDE at or beyond (site specific dose receptor point)</li> <li>Analysis of a liquid effluent sample indicates a concentration or release rate that would result in doses greater than 10 mrem TEDE or 50 mrem thyroid CDE at or beyond (site-specific dose receptor point) for one hour of exposure.</li> <li>Field survey results indicate <b>EITHER</b> of the following at or beyond (site specific dose receptor point): <ul style="list-style-type: none"> <li>Closed window dose rates greater than 10 mR/hr expected to continue for 60 minutes or longer.</li> <li>Analysis of field survey samples indicate thyroid CDE greater than 50 mrem for one hour of inhalation.</li> </ul> </li> </ol>	<p style="text-align: right;"><b>RA1</b></p> <p><b>Initiating Condition:</b></p> <p>Release of gaseous or liquid radioactivity resulting in offsite dose greater than 10 mrem TEDE or 50 mrem thyroid CDE.</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL) :</b></p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</li> <li>If an ongoing release is detected and the release start time is unknown, assume that the release duration has exceeded 15 minutes.</li> <li>Classification based on effluent monitor readings assumes that a release path to the environment is established. 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In order to delete the following from the basis "Classification based on effluent monitor readings assumes that a release path to the environment is established. If the effluent flow past an effluent monitor is known to have stopped due to actions to isolate the release path, then the effluent monitor reading is no longer valid for classification purposes." This allows for more timely classification since all the information pertaining to Note bullet 3 will be contained in the IC and therefore readily available to the SM/Emergency director.</li> <li>Computation EP-EAL-0629 was performed, in accordance with (IAW) guidance provided in NEI 99-01 revision 6 EAL AA1, to determine the effluent monitor response for a radioactive liquid release via the normal site release pathway. The release would contain activity equivalent to provide 10mrem TEDE or 50mrem thyroid CDE at the site boundary. The computation determined the effluent monitor responses would be &gt;110% of the instruments maximum range and as such, IAW NEI 99-01 Rev 6 guidance, was not included in this EAL.</li> <li>Per the ODCM Figure 4-2, Ginna has 3 gaseous release points that are typical release points. Each of these points employs a normal and high range noble gas monitor. <ul style="list-style-type: none"> <li>Plant Vent (R-14 and R-14A)</li> <li>Containment Shutdown Purge (R-12 and R-12A) (Modes 5,6 and D)*</li> <li>Condenser Air Ejector (R-15 and R-48)</li> </ul> <p>* The containment shutdown purge is normally only available in Modes 5, 6 and D</p> </li> </ol> <p>For RA1.1, RS1.1 and RG1.1, monitors (R-14A, R-12A and R-48) are used in this calculation. Monitors (R-14A and R-15) will be used in the RU1.2 threshold.</p> <p>The air ejector noble gas high range monitor (R-48) is used as the effluent monitor since it is the last monitor in line prior to release to the environment. Should there be a primary to secondary leak where the Steam Generator is isolated and is releasing steam through its atmospheric relief valves then this condition will be bound by the Fission Product Barrier Loss and Potential Loss of Reactor Coolant System and Containment. This condition is also bound in this IC under EAL #2 and #3 through dose assessment and field survey results.</p> <p>Liquid Radwaste Effluent Monitor R-18 was not used in the NEI 99-01 Rev 6 EAL scheme since it was found to be &gt;110% of its full range for the condition described in the IC, this is IAW NEI 99-01 Rev 6 Developer note. EAL #3, analysis of liquid sample will bound this condition.</p>
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<p style="text-align: right;"><b>AU1</b></p> <p><b>Initiating Condition – UNUSUAL EVENT</b></p> <p>Release of gaseous or liquid radioactivity greater than 2 times the (site-specific effluent release controlling document) limits for 60 minutes or longer</p> <p><b>Operating Mode Applicability:</b> All</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3 )</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>The Emergency Director should declare the Unusual Event promptly upon determining that 60 minutes has been exceeded, or will likely be exceeded.</li> <li>If an ongoing release is detected and the release start time is unknown, assume that the release duration has exceeded 60 minutes.</li> <li>If the effluent flow past an effluent monitor is known to have stopped, due to actions to isolate the release path, the effluent monitor reading is no longer valid for classification purposes.</li> </ul> <ol style="list-style-type: none"> <li>Reading on <b>ANY</b> effluent radiation monitor greater than 2 times the (site-specific effluent release controlling document) limits for 60 minutes or longer: (site-specific monitor list and threshold values corresponding to 2 times the controlling document limits)</li> <li>Reading on <b>ANY</b> effluent radiation monitor greater than 2 times the alarm setpoint established by a current radioactivity discharge permit for 60 minutes or longer.</li> <li>Sample analysis for a gaseous or liquid release indicates a concentration or release rate greater than 2 times the (site-specific effluent release controlling document) limits for 60 minutes or longer.</li> </ol>	<p style="text-align: right;"><b>RU1</b></p> <p><b>Initiating Condition:</b></p> <p>Release of gaseous or liquid radioactivity greater than 2 times the ODCM limits for 60 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL) :</b></p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</li> <li>If an ongoing release is detected and the release start time is unknown, assume that the release duration has exceeded 60 minutes.</li> <li>Classification based on effluent monitor readings assumes that a release path to the environment is established. If the effluent flow past an effluent monitor is known to have stopped due to actions to isolate the release path, then the effluent monitor reading is no longer valid for classification purposes.</li> </ul> <ol style="list-style-type: none"> <li>Reading on <b>ANY</b> of the following effluent monitors <b>&gt; 2 x the alarm setpoint</b> established by a current radioactive release discharge permit for <b>≥ 60 minutes</b>. <ul style="list-style-type: none"> <li>Liquid Radwaste Effluent Monitor (R-18) with no isolation.</li> <li>Discharge Permit specified monitor</li> </ul> </li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>Reading on <b>ANY</b> Table R1 effluent monitors <b>&gt; Table R1 column UE value</b> for <b>≥ 60 minutes</b>.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>Confirmed sample analyses for gaseous or liquid releases indicate concentrations or release rates <b>&gt; 2 x ODCM Limit</b> with a release duration of <b>≥ 60 minutes</b>.</li> </ol> <table border="1" data-bbox="1174 1320 1942 1602" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">Table R1 – Effluent Monitor Thresholds</th> </tr> <tr> <th style="text-align: center;">Monitor</th> <th style="text-align: center;">Unusual Event (UE)</th> </tr> </thead> <tbody> <tr> <td><b>CNMT Vent Noble Gas High Range (R-12A)</b></td> <td style="text-align: center;">N/A</td> </tr> <tr> <td><b>Plant Vent Noble Gas High Range (R-14A)</b></td> <td style="text-align: center;">3.63 E -01 uCi/cc</td> </tr> <tr> <td><b>Air Ejector and Gland Steam Exhaust Monitor (R-15)</b></td> <td style="text-align: center;">2.29 E +06 cpm</td> </tr> </tbody> </table>	Table R1 – Effluent Monitor Thresholds		Monitor	Unusual Event (UE)	<b>CNMT Vent Noble Gas High Range (R-12A)</b>	N/A	<b>Plant Vent Noble Gas High Range (R-14A)</b>	3.63 E -01 uCi/cc	<b>Air Ejector and Gland Steam Exhaust Monitor (R-15)</b>	2.29 E +06 cpm	<p style="text-align: center;"> <input type="checkbox"/> No Change     <input checked="" type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <ol style="list-style-type: none"> <li>Listed site-specific monitors and Threshold values to ensure timely classification.</li> <li>Added the following to bullet #3 " Classification based on effluent monitor readings assumes that a release path to the environment is established." In order to delete the following from the basis "Classification based on effluent monitor readings assumes that a release path to the environment is established. If the effluent flow past an effluent monitor is known to have stopped due to actions to isolate the release path, then the effluent monitor reading is no longer valid for classification purposes." This allows for more timely classification since all the information pertaining to Note bullet 3 will be contained in the IC and therefore readily available to the SM/Emergency director.</li> <li>Per the ODCM Figure 4-2, Ginna has 3 release points that are typical release points. Each of these points employs a normal and high range monitor. <ul style="list-style-type: none"> <li>Plant Vent (R-14 and R-14A)</li> <li>Containment Shutdown Purge (R-12 and R-12A) (Modes 5,6 and D)*</li> <li>Condenser Air Ejector (R-15 and R-48)</li> </ul> <p style="margin-left: 40px;">* The containment shutdown purge is normally only available in Modes 5, 6 and D</p> </li> </ol> <p>For RA1.1, RS1.1 and RG1.1, monitors (R-14A, R-12A and R-48) are used in this calculation. Monitors (R-14A and R-15) will be used in the RU1.2 threshold.</p> <p>For release pathways with multiple in-line radiation monitors the last monitor prior to release to the environment is used for this IC.</p> <p>SFP HX Effluent (R-20A/R-20B), are not included since it would require 2x the release limit to be exceeded. The release limit of 2.4E-4 uCi/ml is equivalent to a monitor reading of 20,000 cpm. Since the normal activity in the pool water is 1E-3 uCi/ml, a leak of 165 gpm would be required to reach an activity of 2.4E-4 uCi/ml in the service water discharge from the heat exchanger. A leak of this size would quickly be known due to pool low level alarms. 2x this release rate would require even a larger leak and is bound and classified under RU2, UNPLANNED loss of water level above irradiated fuel.</p> <p>Also radiation monitors for Turbine Building Floor Drains (R-21), and Hi Cond Waste (R-22) are not used in the EALs based on NEI 99-01 Rev 6 as they are not considered as typical effluent release points. They would require an RCS leak to provide activity release via these pathways and as such are bound and classifiable under MU6 and the FPB EALs within the NEI 99-01 Rev 6 scheme.</p> <p>The Containment Vent Noble Gas High Range monitor (R-12A) has no threshold for a UE. NEI 99-01 Rev. 6 requires the use of the ODCM methodology for the determination of the UE threshold. The ODCM methodology includes just one isotope Xe-133. When this methodology is used for the computation of the UE value the resultant threshold is greater than the value determined for the Alert level. Therefore this monitor will have no UE level threshold.</p>
Table R1 – Effluent Monitor Thresholds												
Monitor	Unusual Event (UE)											
<b>CNMT Vent Noble Gas High Range (R-12A)</b>	N/A											
<b>Plant Vent Noble Gas High Range (R-14A)</b>	3.63 E -01 uCi/cc											
<b>Air Ejector and Gland Steam Exhaust Monitor (R-15)</b>	2.29 E +06 cpm											

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>AG2</b></p> <p><b>Initiating Condition -- GENERAL EMERGENCY</b></p> <p>Spent fuel pool level cannot be restored to at least (site-specific Level 3 description) for 60 minutes or longer.</p> <p><b>Operating Mode Applicability:</b> All</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>NOTE:</b> The Emergency Director should declare the General Emergency promptly upon determining that 60 minutes has been exceeded, or will likely be exceeded</p> <p>1. Spent fuel pool level cannot be restored to at least (site-specific Level 3 value) for 60 minutes or longer.</p>	<p style="text-align: right;"><b>RG2</b></p> <p><b>Initiating Condition:</b></p> <p>Spent fuel pool level cannot be restored to at least 251.67 ft. for 60 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL) :</b></p> <p><b>Note:</b> The Emergency Director should declare the General Emergency promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>Spent fuel pool level cannot be restored to at least <b>251.67 ft.</b> as indicated on <b>EITHER</b> LI-310 or LI-311 for <b>≥ 60 minutes</b>.</p>	<p> <input checked="" type="checkbox"/> No Change         <input type="checkbox"/> Difference         <input type="checkbox"/> Deviation       </p> <p>1) Listed site-specific indicator and Threshold values to ensure timely classification.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>AS2</b></p> <p><b>Initiating Condition – SITE AREA EMERGENCY</b> Spent fuel pool level at (site-specific Level 3 description)</p> <p><b>Operating Mode Applicability:</b> All</p> <p><b>Example Emergency Action Levels:</b></p> <p>1. Lowering of spent fuel pool level to (site-specific Level 3 value)</p>	<p style="text-align: right;"><b>RS2</b></p> <p><b>Initiating Condition:</b> Spent fuel pool level at 251.67 ft.</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL) :</b> Lowering of spent fuel pool level to <b>251.67 ft.</b> as indicated on <b>EITHER</b> LI-310 or LI-311.</p>	<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed site-specific indicator and Threshold values to ensure timely classification</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>AA2</b></p> <p><b>Initiating Condition – ALERT</b></p> <p>Significant lowering of water level above, or damage to, irradiated fuel.</p> <p><b>Operating Mode Applicability:</b> All</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3 )</p> <ol style="list-style-type: none"> <li>1. Uncovery of irradiated fuel in the REFUELING PATHWAY.</li> <li>2. Damage to irradiated fuel resulting in a release of radioactivity from the fuel as indicated by <b>ANY</b> of the following radiation monitors:  (site-specific listing of radiation monitors, and the associated readings, setpoints and/or alarms)</li> <li>3. Lowering of spent fuel pool level to (site-specific Level 2 value).</li> </ol>	<p style="text-align: right;"><b>RA2</b></p> <p><b>Initiating Condition:</b></p> <p>Significant lowering of water level above, or damage to, irradiated fuel.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6,D</p> <p><b>Emergency Action Levels (EAL) :</b></p> <ol style="list-style-type: none"> <li>1. Uncovery of irradiated fuel in the REFUELING PATHWAY. <b>OR</b></li> <li>2. Damage to irradiated fuel resulting in a release of radioactivity from the fuel as indicated by <b>ANY</b> Table R2 Radiation Monitor Alarm. <b>OR</b></li> <li>3. Lowering of spent fuel pool level to <b>257.25 ft.</b> as indicated on <b>EITHER</b> LI-310 or LI-311.</li> </ol> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"><b>Table R2 Fuel Handling Radiation Monitors</b></p> <ul style="list-style-type: none"> <li>• R-2 Containment (Mode 6 and D)</li> <li>• R-5 Spent Fuel Pool (All Modes)</li> </ul> </div>	<p style="text-align: center;"> <input checked="" type="checkbox"/> No Change     <input type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <p>1) Listed site-specific monitors, indicator, and Threshold values to ensure timely classification.</p> <p>2) R12 and R14 are not listed in table R2 since they are bound in the effluent release IC RU1. In RU1 a value equivalent to 2x the ODCM limit is used as their threshold, to list them in Table R2 at their alarm value (equivalent to a % of one ODCM limit) would have an Alert declaration possible when in the effluent release IC's the threshold for the Unusual Event would not have yet been reached.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>AU2</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b> UNPLANNED loss of water level above irradiated fuel</p> <p><b>Operating Mode Applicability: All</b></p> <p><b>Example Emergency Action Levels:</b></p> <p>1. a. UNPLANNED water level drop in the REFUELING PATHWAY as indicated by ANY of the following:</p> <p style="padding-left: 40px;">(site-specific level indications).</p> <p><b>AND</b></p> <p>b. UNPLANNED rise in area radiation levels as indicated by ANY of the following radiation monitors.</p> <p style="padding-left: 40px;">(site-specific list of area radiation monitors)</p>	<p style="text-align: right;"><b>RU2</b></p> <p><b>Initiating Condition:</b> UNPLANNED loss of water level above irradiated fuel</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL) :</b></p> <p>1. a. UNPLANNED water level drop in the REFUELING PATHWAY as indicated by ANY of the following:</p> <ul style="list-style-type: none"> <li>• Refueling Cavity water level &lt;23 ft above the Reactor Flange</li> <li><b>OR</b></li> <li>• Spent Fuel Pool water level &lt; 23 ft.(Equivalent to &lt; 274.50 feet on EITHER LI-310 or LI-311) above the fuel</li> <li><b>OR</b></li> <li>• Indication or report of a drop in water level in REFUELING PATHWAY.</li> </ul> <p><b>AND</b></p> <p>b. UNPLANNED Area Radiation Monitor reading rise on ANY radiation monitor in Table R2.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"><b>Table R2</b> <b>Fuel Handling Radiation Monitors</b></p> <ul style="list-style-type: none"> <li>• R-2 Containment (Mode 6 and D)</li> <li>• R-5 Spent Fuel Pool (All Modes)</li> </ul> </div>	<p style="text-align: center;"> <input checked="" type="checkbox"/> No Change     <input type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <p>1) Listed site-specific level indication and monitors to ensure timely classification.</p> <p>2) R12 and R14 are not listed in table R2 since they are bound in the effluent release IC RU1. In RU1 a value equivalent to 2x the ODCM limit is used as their threshold, to list them in Table R2 at any unplanned rise in conjunction with a loss in refueling level would have an Unusual Event declaration possible when in the effluent release IC's the threshold for the Unusual Event would not have yet been reached.</p>



NEI 99-01 Rev 6	Proposed EAL	Justification								
<p style="text-align: right;"><b>AA3</b></p> <p><b>Initiating Condition – ALERT</b></p> <p>Radiation levels that impede access to equipment necessary for normal plant operations, cooldown or shutdown.</p> <p><b>Operating Mode Applicability:</b> All</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <p><b>Note:</b> If the equipment in the listed room or area was already inoperable or out of service before the event occurred, then no emergency classification is warranted.</p> <ol style="list-style-type: none"> <li>Dose rate greater than 15 mR/hr in <b>ANY</b> of the following areas: <ul style="list-style-type: none"> <li>Control Room</li> <li>Central Alarm Station</li> <li>(other site-specific areas/rooms)</li> </ul> </li> <li>An UNPLANNED event results in radiation levels that prohibit or impede access to any of the following plant rooms or areas: (site-specific list of plant rooms or areas with entry-related mode applicability identified)</li> </ol>	<p style="text-align: right;"><b>RA3</b></p> <p><b>Initiating Condition:</b></p> <p>Radiation levels that impede access to equipment necessary for normal plant operations, cooldown or shutdown.</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4, 5, 6,D</p> <p><b>Emergency Action Levels (EAL) :</b></p> <p><b>Note:</b> If the equipment in the rooms or areas listed in Table R4 was already inoperable, or out of service, before the event occurred, then no emergency classification is warranted.</p> <ol style="list-style-type: none"> <li>Dose rate &gt; <b>15 mR/hr</b> in <b>ANY</b> of the areas contained in Table R3.</li> </ol> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"><b>Table R3</b> <b>Areas Requiring Continuous Occupancy</b></p> <ul style="list-style-type: none"> <li>• Main Control Room – R-1</li> <li>• Central Alarm Station – (by survey)</li> </ul> </div> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>UNPLANNED event results in radiation levels that prevent or significantly impede access to <b>ANY</b> of the plant rooms or areas contained in Table R4.</li> </ol> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;"><b>Table R4</b> <b>Areas with Entry-Related Mode Applicability</b></th> </tr> <tr> <th style="width: 50%; text-align: center;"><b>Area</b></th> <th style="width: 50%; text-align: center;"><b>Entry-Related Mode Applicability</b></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Auxiliary Building Top Floor</td> <td rowspan="3" style="text-align: center; vertical-align: middle;">Mode 3, 4, and 5</td> </tr> <tr> <td style="text-align: center;">Auxiliary Building Middle Level</td> </tr> <tr> <td style="text-align: center;">Auxiliary Building Basement</td> </tr> </tbody> </table> </div>	<b>Table R4</b> <b>Areas with Entry-Related Mode Applicability</b>		<b>Area</b>	<b>Entry-Related Mode Applicability</b>	Auxiliary Building Top Floor	Mode 3, 4, and 5	Auxiliary Building Middle Level	Auxiliary Building Basement	<p style="text-align: center;"> <input type="checkbox"/> No Change      <input checked="" type="checkbox"/> Difference      <input type="checkbox"/> Deviation </p> <ol style="list-style-type: none"> <li>Listed site specific plant rooms and areas with identified mode applicability to ensure timely classification.</li> <li>Additional discussion added to the basis section describing Table R4 as follows: <p style="margin-left: 20px;">“This IC addresses elevated radiation levels in certain plant rooms/areas sufficient to preclude or impede personnel from performing actions necessary to transition the plant from normal plant operation to cooldown and shutdown as specified in normal plant procedures. As such, it represents an actual or potential substantial degradation of the level of safety of the plant. The Emergency Director should consider the cause of the increased radiation levels and determine if another IC may be applicable.</p> <p style="margin-left: 20px;"><i>Assuming all plant equipment is operating as designed, normal operation is capable from the Main Control Room (MCR). The plant is also able to transition into a hot shutdown condition from the MCR, therefore Table R4 is a list of plant rooms or areas with entry-related mode applicability that contain equipment which require a manual/local action necessary to transition the plant from normal plant operation to cooldown and shutdown as specified in normal operating procedures (establish shutdown cooling), where if this action is not completed the plant would not be able to attain and maintain cold shutdown. This Table does not include rooms or areas for which entry is required solely to perform actions of an administrative or record keeping nature (e.g., normal rounds or routine inspections).</i></p> <p style="margin-left: 20px;"><i>Rooms and areas listed in EAL #1 do not need to be included in EAL #2, including the Control Room.”</i></p> </li> </ol>
<b>Table R4</b> <b>Areas with Entry-Related Mode Applicability</b>										
<b>Area</b>	<b>Entry-Related Mode Applicability</b>									
Auxiliary Building Top Floor	Mode 3, 4, and 5									
Auxiliary Building Middle Level										
Auxiliary Building Basement										

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SU3</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b>  Reactor coolant activity greater than Technical Specification allowable limits.</p> <p><b>Operating Mode Applicability:</b>  Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <ol style="list-style-type: none"> <li>(Site-specific radiation monitor) reading greater than (site-specific value).</li> <li>Sample analysis indicates that a reactor coolant activity value is greater than an allowable limit specified in Technical Specifications.</li> </ol>	<p style="text-align: right;"><b>RU3</b></p> <p><b>Initiating Condition:</b>  Reactor coolant activity greater than Technical Specification allowable limits.</p> <p><b>Operating Mode Applicability:</b>  1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <ol style="list-style-type: none"> <li>Letdown Monitor (R-9) reading <math>\geq 4.8</math> R/hr.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>RCS specific activity <math>&gt; 60.0 \mu\text{Ci/gm}</math> Dose Equivalent I-131.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>RCS specific activity <math>&gt; 650 \mu\text{Ci/gm}</math> Dose Equivalent Xe-133</li> </ol>	<p><input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed site-specific monitor and threshold value to ensure timely classification.</p> <p>2) Listed this system category EAL in the radiological category EAL section to maintain consistency with Exelon Fleet EALs. This will ensure a timely classification since the threshold values are more aligned with the radiological category vice system category.</p>

**Fission Product Barrier Matrix**

**Hot Matrix**

GENERAL EMERGENCY			SITE AREA EMERGENCY				ALERT	
<b>FG1</b> Loss of any two barriers AND Loss or Potential Loss of third barrier. 1,2,3,4			<b>FS1</b> Loss or Potential Loss of ANY two barriers. 1,2,3,4				<b>FA1</b> ANY Loss or ANY Potential Loss of either Fuel Clad or RCS barrier. 1,2,3,4	
Sub-Category	FC – Fuel Clad		RC – Reactor Coolant System		CT - Containment			
	Loss	Potential Loss	Loss	Potential Loss	Loss	Potential Loss		
1. RCS or SG Tube Leakage	None	<b>Orange Path</b> conditions exist, F-0.2 Core Cooling	1. Automatic or manual SI actuation is required by <b>EITHER</b> of the following: a. UNISOLABLE RCS leakage <b>OR</b> b. Steam Generator tube RUPTURE.	2. RCS leak rate $\geq 50$ gpm with letdown isolated. <b>OR</b> 3. <b>Red path</b> conditions exist, F-0.4 Integrity	A leaking or RUPTURED SG $\geq 50$ gpm is FAULTED outside of containment.	None		
2. Inadequate Heat Removal	1. <b>Red Path</b> conditions exist, F-0.2 Core Cooling	2. <b>Orange Path</b> conditions exist., F-0.2 Core Cooling <b>OR</b> 3. <b>Red Path</b> conditions exist, F-0.3 Heat Sink	None	<b>Red Path</b> conditions exist, F-0.3 Heat Sink	None	<b>Red Path</b> conditions exist, F-0.2 Core Cooling <b>AND</b> Functional Restoration procedures <b>not</b> effective in <b>&lt; 15 minutes</b>		
3. Containment Radiation/RCS Activity	1. Containment radiation monitor R-29/R-30 reading $> 700$ R/hr <b>OR</b> 2. Letdown Monitor reading (R-9) $\geq 24$ R/hr with letdown in service <b>OR</b> 3. Coolant activity as sampled $> 300\mu\text{Ci/gm}$ Dose Equivalent I-131.	None	Containment radiation monitor R-29/R-30 reading $> 10$ R/hr	None	None	Containment radiation monitor R-29/R-30 reading $> 7000$ R/hr		
4. Containment Integrity or Bypass	None	None	None	None	1. Containment isolation is required <b>AND EITHER</b> of the following: a. UNPLANNED lowering in containment pressure or rise in radiation monitor readings outside of containment that in the Emergency Director's judgment indicate a loss of containment integrity. <b>OR</b> b. UNISOLABLE pathway from containment to the environment exists. <b>OR</b> 2. Indication of RCS leakage outside of containment	3. <b>Red path</b> conditions exist, F-0.5 Containment. <b>OR</b> 4. Hydrogen Concentration in Containment $\geq 4\%$ . <b>OR</b> 5. a. Containment pressure $\geq 28$ psig <b>AND</b> b. <b>EITHER</b> of the following conditions for $\geq 15$ minutes: • $< 2$ CRFC units operating • $< 1$ CS pump operating		
5. Emergency Director Judgment	1. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Loss of the Fuel Clad Barrier.	2. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Potential Loss of the Fuel Clad Barrier.	1. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Loss of the RCS Barrier.	2. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Potential Loss of the RCS Barrier.	1. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Loss of the Containment Barrier.	2. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Potential Loss of the Containment Barrier.		

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>FC1</b></p> <p><b>Category: Fuel Clad Barrier</b> RCS or SG tube leakage</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Potential Loss A. RCS/reactor vessel level less than (site-specific level).</p>	<p style="text-align: right;"><b>FC1</b></p> <p><b>Category: Fuel Clad Barrier</b> RCS or SG tube leakage</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Potential Loss</u> <b>Orange Path</b> conditions exist, F-0.2 Core Cooling</p>	<p> <input checked="" type="checkbox"/> No Change     <input type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <p>1) Listed site-specific threshold value as a CSFST path in lieu of parameters and values. As per the developer notes, developers should consider including a threshold the same as, or similar to, "Core Cooling Orange entry conditions met" in accordance with the guidance in NEI 99-01 Rev 6 to ensure timely classification</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>FC2</b></p> <p><b>Category: Fuel Clad Barrier</b> Inadequate Heat Removal <b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown <b>Fission Product Barrier Threshold:</b> Loss A. Core exit thermocouple readings greater than (site-specific temperature value). Potential Loss A. Core exit thermocouple readings greater than (site-specific temperature value). <b>OR</b> B. Inadequate RCS heat removal capability via steam generators as indicated by (site-specific indications).</p>	<p style="text-align: right;"><b>FC2</b></p> <p><b>Category: Fuel Clad Barrier</b> Inadequate Heat Removal <b>Operating Mode Applicability:</b> 1, 2, 3, 4 <b>Fission Product Barrier (FPB) Threshold:</b> <u>Loss</u> 1. <b>Red Path</b> conditions exist, F-0.2 Core Cooling <u>Potential Loss</u> 2. <b>Orange Path</b> conditions exist., F-0.2 Core Cooling <b>OR</b> 3. <b>Red Path</b> conditions exist, F-0.3 Heat Sink</p>	<p style="text-align: center;"> <input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site-specific threshold value as a CSFST path in lieu of parameters and values. As per the developer notes, developers should consider including a threshold the same as, or similar to, Loss 1) developers should consider including a threshold the same as, or similar to, "Core Cooling Red entry conditions met"  Potential Loss 1) developers should consider including a threshold the same as, or similar to, "Core Cooling Orange entry conditions met" 2) developers should consider including a threshold the same as, or similar to, "Heat Sink Red entry conditions met"</p> <p>in accordance with the guidance in NEI 99-01 Rev 6 to ensure timely classification.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>FC3</b></p> <p><b>Category: Fuel Clad Barrier</b> RCS Activity / Containment Radiation</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Loss</p> <p>A. Containment radiation monitor reading greater than (site-specific value). <b>OR</b></p> <p>B. (Site-specific indications that reactor coolant activity is greater than 300 μCi/gm dose equivalent I-131).</p>	<p style="text-align: right;"><b>FC3</b></p> <p><b>Category: Fuel Clad Barrier</b> Containment Radiation / RCS Activity</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Loss</u></p> <p>1. Containment radiation monitor R-29/R-30 reading &gt; <b>700 R/hr.</b></p> <p><b>OR</b></p> <p>2. Letdown Monitor reading (R-9) ≥ <b>24 R/hr</b> with letdown in service.</p> <p><b>OR</b></p> <p>3. Coolant activity as sampled &gt; <b>300μCi/gm</b> Dose Equivalent I-131.</p>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site-specific monitor and threshold value to ensure timely classification. 2) In Accordance with NEI 99-01 Revision 6, reactor coolant activity above 300 μCi/gm is greater than that expected for iodine spikes and corresponds to an approximate range of 2% to 5% fuel clad damage. The radiation level in EAL #1 is based on 2% fuel clad damage</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>FC6</b></p> <p><b>Category: Fuel Clad Barrier</b> Emergency Director Judgment</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Loss</p> <p>A. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Loss of the Fuel Clad Barrier.</p> <p>Potential Loss</p> <p>A. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Potential Loss of the Fuel Clad Barrier.</p>	<p style="text-align: right;"><b>FC5</b></p> <p><b>Category: Fuel Clad Barrier</b> Emergency Director Judgment</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Loss</u></p> <p>1. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Loss of the Fuel Clad Barrier.</p> <p><u>Potential Loss</u></p> <p>2. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Potential Loss of the Fuel Clad Barrier.</p>	<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>RC1</b></p> <p><b>Category: Reactor Coolant System Barrier</b> RCS or SG Tube Leakage</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Loss</p> <p>A. An automatic or manual ECCS (SI) actuation is required by <b>EITHER</b> of the following:</p> <ol style="list-style-type: none"> <li>1. UNISOLABLE RCS leakage</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. SG tube RUPTURE.</li> </ol> <p>Potential Loss</p> <p>A. Operation of a standby charging (makeup) pump is required by <b>EITHER</b> of the following:</p> <ol style="list-style-type: none"> <li>1. UNISOLABLE RCS leakage</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. SG tube leakage.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <p>B. RCS cooldown rate greater than (site-specific pressurized thermal shock criteria/limits defined by site-specific indications).</p>	<p style="text-align: right;"><b>RC1</b></p> <p><b>Category: Reactor Coolant System Barrier</b> RCS or SG Tube Leakage</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Loss</u></p> <ol style="list-style-type: none"> <li>1. Automatic or manual SI actuation is required by <b>EITHER</b> of the following: <ol style="list-style-type: none"> <li>a. UNISOLABLE RCS leakage</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>b. Steam Generator tube RUPTURE.</li> </ol> </li> </ol> <p><u>Potential Loss</u></p> <ol style="list-style-type: none"> <li>2. RCS leak rate <math>\geq</math> 50 gpm with letdown isolated.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>3. <b>Red path</b> conditions exist, F-0.4 Integrity</li> </ol>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site-specific threshold value as a CSFST path in lieu of parameters and values. As per the developer notes, developers should consider including a threshold the same as, or similar to "RCS Integrity Red entry conditions met" in accordance with the guidance in NEI 99-01 Rev 6 to ensure timely classification.</p> <p>2) Due to variability in site-specific charging pump alignment, an RCS leak rate of 50 gpm is used as an alternate potential loss threshold in accordance with guidance of NEI 99-01 Revision 6. The additional words of "with letdown isolated" ensures this value excludes normal reductions in RCS inventory.</p>



NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>RC2</b></p> <p><b>Category: Reactor Coolant System Barrier</b>            Inadequate Heat Removal  <b>Operating Mode Applicability:</b>            Power Operation, Startup, Hot Standby, Hot Shutdown  <b>Fission Product Barrier Threshold:</b>            Potential Loss            A. Inadequate RCS heat removal capability via steam generators as indicated by (site-specific indications).</p>	<p style="text-align: right;"><b>RC2</b></p> <p><b>Category: Reactor Coolant System Barrier</b>            Inadequate Heat Removal  <b>Operating Mode Applicability:</b>            1, 2, 3, 4  <b>Fission Product Barrier (FPB) Threshold:</b>  <u>Potential Loss</u>  <b>Red Path</b> conditions exist, F-0.3 Heat Sink</p>	<p style="text-align: center;"> <input checked="" type="checkbox"/> No Change              <input type="checkbox"/> Difference              <input type="checkbox"/> Deviation         </p> <p>1) Listed site-specific threshold value as a CSFST path in lieu of parameters and values. As per the developer notes, developers should consider including a threshold the same as, or similar to "Heat Sink Red entry conditions met" in accordance with the guidance in NEI 99-01 Rev 6 to ensure timely classification.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>RC3</b></p> <p><b>Category: Reactor Coolant System Barrier</b>            Containment Radiation / RCS Activity  <b>Operating Mode Applicability:</b>            Power Operation, Startup, Hot Standby, Hot Shutdown  <b>Fission Product Barrier Threshold:</b>            Loss            A. Containment radiation monitor reading greater than (site-specific value).</p>	<p style="text-align: right;"><b>RC3</b></p> <p><b>Category: Reactor Coolant System Barrier</b>            Containment Radiation / RCS Activity  <b>Operating Mode Applicability:</b>            1, 2, 3, 4  <b>Fission Product Barrier (FPB) Threshold:</b>  <u>Loss</u>            Containment radiation monitor R-29/R-30 reading &gt; <b>10 R/hr</b></p>	<p> <input checked="" type="checkbox"/> No Change              <input type="checkbox"/> Difference              <input type="checkbox"/> Deviation         </p> <p>1) Listed site-specific systems and threshold values to ensure timely classification.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>RC6</b></p> <p><b>Category: Reactor Coolant System Barrier</b> Emergency Director Judgment</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Loss</p> <p>A. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Loss of the RCS Barrier.</p> <p>Potential Loss</p> <p>A. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Potential Loss of the RCS Barrier.</p>	<p style="text-align: right;"><b>RC5</b></p> <p><b>Category: Reactor Coolant System Barrier</b> Emergency director Judgment</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Loss</u></p> <p>1. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Loss of the RCS Barrier.</p> <p><u>Potential Loss</u></p> <p>2. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Potential Loss of the RCS Barrier.</p>	<p> <input checked="" type="checkbox"/> No Change         <input type="checkbox"/> Difference         <input type="checkbox"/> Deviation       </p>

NEI 99-01 Rev 6	Proposed EAL	Justification																	
<p style="text-align: right;"><b>CT1</b></p> <p><b>Category: Containment Barrier</b> RCS or SG Tube Leakage</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Loss A. A leaking or RUPTURED SG is FAULTED outside of containment.</p>	<p style="text-align: right;"><b>CT1</b></p> <p><b>Category: Containment Barrier</b> RCS or SG Tube Leakage</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Loss</u> A leaking or RUPTURED SG <math>\geq 50</math>gpm is FAULTED outside of containment.</p>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1. Added leakrate of <math>\geq 50</math>gpm as per guidance contained in NEI 99-01 Revision 6 as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2" style="text-align: center;"><b>Primary-to-Secondary Leak Rate</b></th> <th colspan="2" style="text-align: center;"><b>Affected SG is FAULTED Outside of Containment?</b></th> </tr> <tr> <th style="text-align: center;"><b>Yes</b></th> <th style="text-align: center;"><b>No</b></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Less than or equal to 25 gpm</td> <td style="text-align: center;">No classification</td> <td style="text-align: center;">No classification</td> </tr> <tr> <td style="text-align: center;">Greater than 25 gpm</td> <td style="text-align: center;">Unusual Event per MU6</td> <td style="text-align: center;">Unusual Event per MU6</td> </tr> <tr> <td style="text-align: center;">RCS leak rate <math>\geq 50</math> gpm with letdown isolated. (<i>RCS Barrier Potential Loss</i>)</td> <td style="text-align: center;">Site Area Emergency per FS1</td> <td style="text-align: center;">Alert per FA1</td> </tr> <tr> <td style="text-align: center;">Requires an automatic or manual SI actuation (<i>RCS Barrier Loss</i>)</td> <td style="text-align: center;">Site Area Emergency per FS1</td> <td style="text-align: center;">Alert per FA1</td> </tr> </tbody> </table>	<b>Primary-to-Secondary Leak Rate</b>	<b>Affected SG is FAULTED Outside of Containment?</b>		<b>Yes</b>	<b>No</b>	Less than or equal to 25 gpm	No classification	No classification	Greater than 25 gpm	Unusual Event per MU6	Unusual Event per MU6	RCS leak rate $\geq 50$ gpm with letdown isolated. ( <i>RCS Barrier Potential Loss</i> )	Site Area Emergency per FS1	Alert per FA1	Requires an automatic or manual SI actuation ( <i>RCS Barrier Loss</i> )	Site Area Emergency per FS1	Alert per FA1
<b>Primary-to-Secondary Leak Rate</b>	<b>Affected SG is FAULTED Outside of Containment?</b>																		
	<b>Yes</b>	<b>No</b>																	
Less than or equal to 25 gpm	No classification	No classification																	
Greater than 25 gpm	Unusual Event per MU6	Unusual Event per MU6																	
RCS leak rate $\geq 50$ gpm with letdown isolated. ( <i>RCS Barrier Potential Loss</i> )	Site Area Emergency per FS1	Alert per FA1																	
Requires an automatic or manual SI actuation ( <i>RCS Barrier Loss</i> )	Site Area Emergency per FS1	Alert per FA1																	

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CT2</b></p> <p><b>Category: Containment Barrier</b> Inadequate Heat Removal</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Potential Loss</p> <p>A. 1. (Site-specific criteria for entry into core cooling restoration procedure) <b>AND</b> 2. Restoration procedure not effective within 15 minutes.</p>	<p style="text-align: right;"><b>CT2</b></p> <p><b>Category: Containment Barrier</b> Inadequate Heat Removal</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Potential Loss</u></p> <p><b>Red Path</b> conditions exist, F-0.2 Core Cooling <b>AND</b> Functional Restoration procedures <b>not</b> effective in <b>&lt; 15 minutes</b>.</p>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site-specific threshold value as a CSFST path in lieu of parameters and values. As per the developer notes, developers should consider including a threshold the same as, or similar to "Core Cooling Red entry conditions met" in accordance with the guidance in NEI 99-01 Rev 6 to ensure timely classification.</p> <p>2) Changed formatting to combine both statements into one.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CT3</b></p> <p><b>Category: Containment Barrier</b> Containment Radiation / RCS Activity</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Potential Loss</p> <p>A. Containment radiation monitor reading greater than (site-specific value).</p>	<p style="text-align: right;"><b>CT3</b></p> <p><b>Category: Containment Barrier</b> Containment Radiation / RCS Activity</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Potential Loss</u></p> <p>Containment radiation monitor R-29/R-30 reading &gt; <b>7000 R/hr</b></p>	<p> <input checked="" type="checkbox"/> No Change         <input type="checkbox"/> Difference         <input type="checkbox"/> Deviation       </p> <p>1) Listed site-specific threshold values to ensure timely classification.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CT4</b></p> <p><b>Category: Containment Barrier</b> Containment Integrity or Bypass</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Loss</p> <p>A. Containment isolation is required <b>AND</b> <b>EITHER</b> of the following: 1. Containment integrity has been lost based on Emergency Director judgment. <b>OR</b> 2. UNISOLABLE pathway from the containment to the environment exists. <b>OR</b></p> <p>B. Indications of RCS leakage outside of containment.</p> <p>Potential Loss</p> <p>A. Containment pressure greater than (site-specific value) <b>OR</b></p> <p>B. Explosive mixture exists inside containment <b>OR</b></p> <p>C. 1. Containment pressure greater than (site-specific pressure setpoint) <b>AND</b> 2. Less than one full train of (site-specific system or equipment) is operating per design for 15 minutes or longer.</p>	<p style="text-align: right;"><b>CT4</b></p> <p><b>Category: Containment Barrier</b> Containment Integrity or Bypass</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Loss</u></p> <p>1. Containment isolation is required <b>AND EITHER</b> of the following: a. UNPLANNED lowering in containment pressure or rise in radiation monitor readings outside of containment that in the Emergency Director's judgment indicate a loss of containment integrity. <b>OR</b> b. UNISOLABLE pathway from containment to the environment exists. <b>OR</b></p> <p>2. Indication of RCS leakage outside of containment</p> <p><u>Potential Loss</u></p> <p>3. <b>Red path</b> conditions exist, F-0.5 Containment. <b>OR</b></p> <p>4. Hydrogen Concentration in Containment <math>\geq 4\%</math>. <b>OR</b></p> <p>5. a. Containment pressure <math>\geq 28</math> psig <b>AND</b> b <b>EITHER</b> of the following conditions for <math>\geq 15</math> minutes:  <ul style="list-style-type: none"> <li>• &lt; 2 CRFC units operating</li> <li>• &lt; 1 CS pump operating</li> </ul> </p>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site-specific monitor and threshold value to ensure timely classification.</p> <p>2) Listed site-specific threshold value as a CSFST path as allowed by NEI 99-01 Rev 6 to ensure timely classification.</p> <p>3) Containment pressure at 28psig is the site-specific setpoint where containment energy (heat) removal systems are designed to automatically actuate. Pressures at or above this setpoint with less than one full train of containment energy (heat) removal systems in service meets this threshold. This is why the threshold is <math>\geq 28</math>psig and not just <math>&gt; 28</math>psig.</p> <p>4) The following equipment is required by Ginna Technical Specifications B.3.6 Containment Systems.</p> <p style="padding-left: 40px;">Two means of post-accident containment heat removal are provided;</p> <ul style="list-style-type: none"> <li>• Containment Spray System and</li> <li>• Containment Recirc Fan Cooler (CRFC) units.</li> </ul> <p style="padding-left: 40px;">At least one train of each of these systems is required to provide sufficient steam-condensing capacity to ensure against containment overstress and to remove residual and chemical heat.</p> <p><u>CRFC Units:</u> The CRFC system is comprised of four CRFC units, two of which are required in the post-accident condition. Each containment air cooling unit consists of cooling coils, accident backdraft damper, accident fan, service water outlet valves, and controls necessary to ensure an operable service water flow path. Following an SI actuation signal, CRFC System fans are designed to start automatically.</p> <p><u>Containment Spray:</u> Each of two containment spray trains consists of a spray pump, spray header, nozzles, valves, piping, instruments, and controls to ensure an operable flow path capable of taking suction from the RWST upon an actuation signal.</p> <p>During a steam line break or LOCA, a minimum of two CRFC units and one Containment Spray (CS) pump are required to maintain peak pressure and temperature below design limits.</p> <p>The wording used in 5b is the equivalent of less than one full train of containment cooling available.</p> <p>The Ginna EAL Basis Document clarifies that when the Containment Spray pumps are shut off in accordance with emergency operating procedure guidance (i.e., ES-1.3, Transfer to Cold Leg Recirculation) the "&lt; 1 CS pump operating" criteria is not considered to be met.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CT6</b></p> <p><b>Category: Containment Barrier</b> Emergency Director Judgment</p> <p><b>Operating Mode Applicability:</b> Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Fission Product Barrier Threshold:</b> Loss A. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Loss of the Containment Barrier.</p> <p>Potential Loss A. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Potential Loss of the Containment Barrier.</p>	<p style="text-align: right;"><b>CT5</b></p> <p><b>Category: Containment Barrier</b> Emergency Director Judgment</p> <p><b>Operating Mode Applicability:</b> 1, 2, 3, 4</p> <p><b>Fission Product Barrier (FPB) Threshold:</b> <u>Loss</u> 1. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Loss of the Containment Barrier.</p> <p><u>Potential Loss</u> 2. <b>ANY</b> Condition in the opinion of the Emergency Director that indicates Potential Loss of the Containment Barrier.</p>	<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p>



NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SG1</b></p> <p><b>Initiating Condition: GENERAL EMERGENCY</b></p> <p>Prolonged loss of all offsite and all onsite AC power to emergency buses.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the General Emergency promptly upon determining that (site-specific hours) has been exceeded, or will likely be exceeded.</p> <p>1. a. Loss of <b>ALL</b> offsite and <b>ALL</b> onsite AC power to (site-specific emergency buses).</p> <p style="padding-left: 40px;"><b>AND</b></p> <p>b. <b>EITHER</b> of the following:</p> <ul style="list-style-type: none"> <li>• Restoration of at least one AC emergency bus in less than (site-specific hours) is not likely.</li> <li>• (Site-specific indication of an inability to adequately remove heat from the core)</li> </ul>	<p style="text-align: right;"><b>MG1</b></p> <p><b>Initiating Condition:</b></p> <p>Prolonged loss of all offsite and all onsite AC power to emergency buses.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. Loss of <b>ALL</b> offsite and <b>ALL</b> onsite AC power to 480V safeguards buses 14 and 16.</p> <p style="padding-left: 40px;"><b>AND</b></p> <p>2. <b>EITHER</b> of the following:</p> <ul style="list-style-type: none"> <li>a. Restoration of 480V safeguards bus 14 or 16 in <b>&lt; 4 hours</b> is <b>not</b> likely.</li> <li style="padding-left: 40px;"><b>OR</b></li> <li>b. <b>Red Path</b> conditions exist, F-0.2 Core Cooling.</li> </ul>	<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Used site specific nomenclature, site specific time based on station blackout coping analysis, and site specific indication as a CSFST path as allowed by NEI 99-01 Rev 6 to ensure timely classification.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SS1</b></p> <p><b>Initiating Condition: SITE AREA EMERGENCY</b></p> <p>Loss of all offsite and all onsite AC power to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the Site Area Emergency promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <p>Loss of <b>ALL</b> offsite and <b>ALL</b> onsite AC power to (site-specific emergency buses) for 15 minutes or longer.</p>	<p style="text-align: right;"><b>MS1</b></p> <p><b>Initiating Condition:</b></p> <p>Loss of all offsite and onsite AC power to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. Loss of <b>ALL</b> offsite and <b>ALL</b> onsite AC power to 480V safeguards buses 14 and 16.</p> <p><b>AND</b></p> <p>2. Failure to restore power to 480V safeguards bus 14 or 16 in <b>&lt; 15 minutes</b> from the time of loss of both offsite and onsite AC power.</p>	<p> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site specific buses to ensure timely classification.</p> <p>2) Changed formatting to be 1 AND 2 formatting.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SA1</b></p> <p><b>Initiating Condition: ALERT</b></p> <p>Loss of all but one AC power source to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the Alert promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <p>1. a. AC power capability to (site-specific emergency buses) is reduced to a single power source for 15 minutes or longer.</p> <p><b>AND</b></p> <p>b. Any additional single power source failure will result in loss of all AC power to SAFETY SYSTEMS.</p>	<p style="text-align: right;"><b>MA1</b></p> <p><b>Initiating Condition:</b></p> <p>Loss of all but one AC power source to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. AC power capability to 480V safeguards buses 14 and 16 reduced to only one of the following power sources for <b>≥ 15 minutes</b>.</p> <ul style="list-style-type: none"> <li>• Station Auxiliary Transformer 12A</li> <li>• Station Auxiliary Transformer 12B</li> <li>• Unit Auxiliary Transformer 11 backfeed</li> <li>• Emergency Diesel Generator EDG 1A</li> <li>• Emergency Diesel Generator EDG 1B</li> </ul> <p><b>AND</b></p> <p>2. <b>ANY</b> additional single power source failure will result in a loss of <b>ALL</b> AC power to SAFETY SYSTEMS powered from 480V safeguards buses 14 and 16.</p>	<p> <input type="checkbox"/> No Change     <input checked="" type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <p>1) Listed site specific equipment and site specific buses to ensure timely classification.</p> <p>2) Added "powered from 480V safeguards buses 14 and 16" to EAL #2 to ensure power to Safeguards Buses 17 and 18 is not considered in this EAL. Safeguards Buses 17 and 18 provide power to the four service water pumps and should not be considered in relation to EAL #2 because the availability of power to Buses 17 and 18 alone does not ensure engineered safety features required for hot shutdown and hot standby modes will be operable.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SU1</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>Loss of all offsite AC power capability to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the Unusual Event promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <p>Loss of <b>ALL</b> offsite AC power capability to (site-specific emergency buses) for 15 minutes or longer</p>	<p style="text-align: right;"><b>MU1</b></p> <p><b>Initiating Condition:</b></p> <p>Loss of all offsite AC power capability to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>Loss of <b>ALL</b> of the following offsite AC power capability to 480V safeguards buses 14 and 16 for <b>≥ 15 minutes</b>.</p> <ul style="list-style-type: none"> <li>• Station Auxiliary Transformer 12A</li> <li>• Station Auxiliary Transformer 12B</li> <li>• Unit Auxiliary Transformer 11 backfeed</li> </ul>	<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed site specific equipment and site specific buses to ensure timely classification.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SG8</b></p> <p><b>Initiating Condition: GENERAL EMERGENCY</b></p> <p>Loss of all AC and Vital DC power sources for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the General Emergency promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <p>1. a. Loss of <b>ALL</b> offsite and <b>ALL</b> onsite AC power to (site-specific emergency buses) for 15 minutes or longer.</p> <p style="padding-left: 40px;"><b>AND</b></p> <p>b. Indicated voltage is less than (site-specific bus voltage value) on <b>ALL</b> (site-specific Vital DC busses) for 15 minutes or longer.</p>	<p style="text-align: right;"><b>MG2</b></p> <p><b>Initiating Condition:</b></p> <p>Loss of all AC and Vital DC power sources for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. Loss of <b>ALL</b> offsite and <b>ALL</b> onsite AC power to 480V safeguards buses 14 and 16.</p> <p style="padding-left: 40px;"><b>AND</b></p> <p>2. Voltage is &lt; <b>110.6 VDC</b> on unit 125 VDC buses 1A and 1B.</p> <p style="padding-left: 40px;"><b>AND</b></p> <p>3. <b>ALL</b> AC and Vital DC power sources have been lost for <b>≥ 15 minutes</b>.</p>	<p><input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed site specific voltage and site specific buses to ensure timely classification.</p> <p>2) Removed the word "indicated" this will allow for an indication problem to not cause confusion on the need to declare.</p> <p>3) Changed formatting to be 1 AND 2 AND 3 formatting.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SS8</b></p> <p><b>Initiating Condition: SITE AREA EMERGENCY</b></p> <p>Loss of all Vital DC power for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the Site Area Emergency promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <p>1. Indicated voltage is less than (site-specific bus voltage value) on <b>ALL (site-specific Vital DC busses)</b> for 15 minutes or longer.</p>	<p style="text-align: right;"><b>MS2</b></p> <p><b>Initiating Condition:</b></p> <p>Loss of all Vital DC power for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>Voltage is &lt; <b>110.6 VDC</b> on unit 125 VDC buses 1A and 1B for <b>≥ 15 minutes</b>.</p>	<p> <input type="checkbox"/> No Change     <input checked="" type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <p>1) Listed site specific buses and site specific value to ensure timely classification.</p> <p>2) Removed the word "indicated" this will allow for an indication problem to not cause confusion on the need to declare.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SS5</b></p> <p><b>Initiating Condition: SITE AREA EMERGENCY</b></p> <p>Inability to shutdown the reactor causing a challenge to (core cooling [PWR] / RPV water level [BWR]) or RCS heat removal.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation</p> <p><b>Example Emergency Action Levels:</b></p> <ol style="list-style-type: none"> <li>1. <ol style="list-style-type: none"> <li>a. An automatic (trip [PWR] / scram [BWR]) did not shutdown the reactor.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <li>b. All manual actions to shutdown the reactor have been unsuccessful.</li> </li></ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>c. <b>EITHER</b> of the following conditions exist: <ul style="list-style-type: none"> <li>• (Site-specific indication of an inability to adequately remove heat from the core)</li> <li>• (Site-specific indication of an inability to adequately remove heat from the RCS)</li> </ul> </li> </ol>	<p style="text-align: right;"><b>MS3</b></p> <p><b>Initiating Condition:</b></p> <p>Inability to shutdown the reactor causing a challenge to core cooling or RCS heat removal.</p> <p><b>Operating Mode Applicability:</b></p> <p>1,2</p> <p><b>Emergency Action Levels (EAL):</b></p> <ol style="list-style-type: none"> <li>1. Automatic or Manual Trip did <b>not</b> shutdown the reactor as indicated by Reactor Power <math>\geq</math> 5%.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>2. <b>ALL</b> manual and local actions to shutdown the reactor have been unsuccessful as indicated by Reactor Power <math>\geq</math> 5%.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>3. <b>EITHER</b> of the following conditions exist: <ol style="list-style-type: none"> <li>a. <b>RED Path</b> conditions exist, F-0.2 Core Cooling.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>b. <b>RED Path</b> conditions exist, F-0.3 Heat Sink.</li> </ol> </li> </ol>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <ol style="list-style-type: none"> <li>1) Listed site specific indications to ensure timely classification.</li> <li>2) Mode 2 included in operating mode applicability as per developer notes.</li> <li>3) Listed site specific indication as CSFST paths as allowed by NEI 99-01 Rev 6 to ensure timely classification.</li> <li>4) Removed the following sentence "A reactor shutdown is determined in accordance with applicable Emergency Operating Procedure criteria" from the basis section since the reactor shutdown criteria is now listed within the EAL.</li> <li>5) Added "and local" to EAL #2 as this is site specific terminology used to differentiate between actions taken in the Main Control Room, manual actions, and actions taken in the field, local actions, with respect to ATWS response.</li> </ol>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SA5</b></p> <p><b>Initiating Condition: ALERT</b></p> <p>Automatic or manual (trip [PWR] / scram [BWR]) fails to shutdown the reactor, and subsequent manual actions taken at the reactor control consoles are not successful in shutting down the reactor.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> A manual action is any operator action, or set of actions, which causes the control rods to be rapidly inserted into the core, and does not include manually driving in control rods or implementation of boron injection strategies.</p> <p>1. a. An automatic or manual (trip [PWR] / scram [BWR]) did not shutdown the reactor.</p> <p style="text-align: center;"><b>AND</b></p> <p>b. Manual actions taken at the reactor control consoles are not successful in shutting down the reactor.</p>	<p style="text-align: right;"><b>MA3</b></p> <p><b>Initiating Condition:</b></p> <p>Automatic or manual trip fails to shutdown the reactor, and subsequent manual actions taken at the reactor control consoles are not successful in shutting down the reactor.</p> <p><b>Operating Mode Applicability:</b></p> <p>1,2</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> A manual action is any operator action, or set of actions, which causes the control rods to be rapidly inserted into the core, and does not include manually driving in control rods or implementation of boron injection strategies.</p> <p>1. Automatic or Manual Trip did <b>not</b> shutdown the reactor as indicated by Reactor Power <math>\geq</math> 5%.</p> <p style="text-align: center;"><b>AND</b></p> <p>2. Manual actions taken at the reactor control console are <b>not</b> successful in shutting down the reactor as indicated by Reactor Power <math>\geq</math> 5%.</p>	<p> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site specific indications to ensure timely classification.</p> <p>2) Mode 2 included in operating mode applicability as per developer notes.</p> <p>3) Removed the following "A reactor shutdown is determined in accordance with applicable Emergency Operating Procedure criteria" from the basis section since the reactor shutdown criteria is now listed within the EAL.</p>



NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SU5</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>Automatic or manual (trip [PWR] / scram [BWR]) fails to shutdown the reactor.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <p><b>Note:</b> A manual action is any operator action, or set of actions, which causes the control rods to be rapidly inserted into the core, and does not include manually driving in control rods or implementation of boron injection strategies.</p> <ol style="list-style-type: none"> <li>1. <ol style="list-style-type: none"> <li>a. An automatic (trip [PWR] / scram [BWR]) did not shutdown the reactor.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. A subsequent manual action taken at the reactor control consoles is successful in shutting down the reactor.</li> </ol> </li> <li>2. <ol style="list-style-type: none"> <li>a. A manual trip ([PWR] / scram [BWR]) did not shutdown the reactor.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. <b>EITHER</b> of the following: <ol style="list-style-type: none"> <li>1. A subsequent manual action taken at the reactor control consoles is successful in shutting down the reactor.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. A subsequent automatic (trip [PWR] / scram [BWR]) is successful in shutting down the reactor.</li> </ol> </li> </ol> </li> </ol>	<p style="text-align: right;"><b>MU3</b></p> <p><b>Initiating Condition:</b></p> <p>Automatic or manual trip fails to shutdown the reactor.</p> <p><b>Operating Mode Applicability:</b></p> <p>1,2</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> A manual action is any operator action, or set of actions, which causes the control rods to be rapidly inserted into the core, and does not include manually driving in control rods or implementation of boron injection strategies.</p> <ol style="list-style-type: none"> <li>1. <ol style="list-style-type: none"> <li>a. Automatic Trip did not shutdown the reactor as indicated by Reactor Power <math>\geq 5\%</math>.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. Subsequent manual action taken at the reactor control console is successful in shutting down the reactor as indicated by Reactor Power <math>&lt;5\%</math>.</li> </ol> </li> <li><b>OR</b></li> <li>2. <ol style="list-style-type: none"> <li>a. Manual Trip did not shutdown the reactor as indicated by Reactor Power <math>\geq 5\%</math>.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. <b>EITHER</b> of the following: <ol style="list-style-type: none"> <li>1. Subsequent manual action taken at the reactor control console is successful in shutting down the reactor as indicated by Reactor Power <math>&lt;5\%</math>.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. Subsequent Automatic Trip is successful in shutting down the reactor as indicated by Reactor Power <math>&lt;5\%</math>.</li> </ol> </li> </ol> </li> </ol>	<p><input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed site specific indications to ensure timely classification.</p> <p>2) Mode 2 included in operating mode applicability as per developer notes.</p> <p>3) Removed the following sentence "A reactor shutdown is determined in accordance with applicable Emergency Operating Procedure criteria" from the basis section since the reactor shutdown criteria is now listed within the EAL.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification																		
<p style="text-align: right;"><b>SA2</b></p> <p><b>Initiating Condition: ALERT</b></p> <p>UNPLANNED loss of Control Room indications for 15 minutes or longer with a significant transient in progress.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the Alert promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <p>1. a. An UNPLANNED event results in the inability to monitor one or more of the following parameters from within the Control Room for 15 minutes or longer. [see table below]</p> <table border="1" data-bbox="149 675 1019 1175"> <thead> <tr> <th>[ BWR parameter list]</th> <th>[ PWR parameter list]</th> </tr> </thead> <tbody> <tr> <td>Reactor Power</td> <td>Reactor Power</td> </tr> <tr> <td>RPV Water Level</td> <td>RCS Level</td> </tr> <tr> <td>RPV Pressure</td> <td>RCS Pressure</td> </tr> <tr> <td>Primary Containment Pressure</td> <td>In Core/Core Exit Temperature</td> </tr> <tr> <td>Suppression Pool Level</td> <td>Levels in at least (site specific number) steam generators</td> </tr> <tr> <td>Suppression Pool Temperature</td> <td>Steam Generator Auxiliary or Emergency Feed Water Flow</td> </tr> </tbody> </table> <p><b>AND</b></p> <p>b. <b>ANY</b>of the following transient events in progress.</p> <ul style="list-style-type: none"> <li>• Automatic or Manual runback greater than 25% thermal reactor power</li> <li>• Electrical load rejection greater than 25% full electrical load</li> <li>• Reactor scram [BWR] / trip [PWR]</li> <li>• ECCS (SI) actuation</li> <li>• Thermal power oscillations greater than 10% [BWR]</li> </ul>	[ BWR parameter list]	[ PWR parameter list]	Reactor Power	Reactor Power	RPV Water Level	RCS Level	RPV Pressure	RCS Pressure	Primary Containment Pressure	In Core/Core Exit Temperature	Suppression Pool Level	Levels in at least (site specific number) steam generators	Suppression Pool Temperature	Steam Generator Auxiliary or Emergency Feed Water Flow	<p style="text-align: right;"><b>MA4</b></p> <p><b>Initiating Condition:</b></p> <p>UNPLANNED loss of Control Room indications for 15 minutes or longer with a significant transient in progress.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. a UNPLANNED event results in the inability to monitor <b>ANY</b> Table M1 parameter from within the Control Room for <b>≥ 15 minutes</b>.</p> <table border="1" data-bbox="1215 733 1889 1090"> <thead> <tr> <th>Table M1 – Control Room Parameters</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>• Reactor Power</li> <li>• PZR Level</li> <li>• RCS Pressure</li> <li>• Core Exit Temperature</li> <li>• Level in at least one Steam Generator</li> <li>• Steam Generator Auxiliary Feed Water Flow</li> </ul> </td> </tr> </tbody> </table> <p><b>AND</b></p> <p>b. Any Table M2 transient in progress.</p> <table border="1" data-bbox="1187 1266 1917 1558"> <thead> <tr> <th>Table M2 – Significant Transients</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>• Automatic Turbine Runback &gt;25% thermal reactor power</li> <li>• Electrical Load Rejection &gt;25% full electrical load</li> <li>• Reactor Trip</li> <li>• Safety Injection Actuation</li> </ul> </td> </tr> </tbody> </table>	Table M1 – Control Room Parameters	<ul style="list-style-type: none"> <li>• Reactor Power</li> <li>• PZR Level</li> <li>• RCS Pressure</li> <li>• Core Exit Temperature</li> <li>• Level in at least one Steam Generator</li> <li>• Steam Generator Auxiliary Feed Water Flow</li> </ul>	Table M2 – Significant Transients	<ul style="list-style-type: none"> <li>• Automatic Turbine Runback &gt;25% thermal reactor power</li> <li>• Electrical Load Rejection &gt;25% full electrical load</li> <li>• Reactor Trip</li> <li>• Safety Injection Actuation</li> </ul>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site specific number of steam generators to ensure timely classification.</p> <p>2) PZR Level used as the parameter that monitors RCS Level as allowed per the developer notes.</p> <p>3) Reference to in Core Temperature has been removed since the site only has ability to monitor Core Exit Temperature through the use of Core Exit Thermocouples (CETs).</p> <p>4) Removed reference to manual runback since the site does not have the ability to insert a manual runback signal.</p> <p>5) Changed the wording of 1a when referring to the site specific Table format.</p>
[ BWR parameter list]	[ PWR parameter list]																			
Reactor Power	Reactor Power																			
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Table M2 – Significant Transients																				
<ul style="list-style-type: none"> <li>• Automatic Turbine Runback &gt;25% thermal reactor power</li> <li>• Electrical Load Rejection &gt;25% full electrical load</li> <li>• Reactor Trip</li> <li>• Safety Injection Actuation</li> </ul>																				

NEI 99-01 Rev 6	Proposed EAL	Justification																
<p style="text-align: right;"><b>SU2</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>UNPLANNED loss of Control Room indications for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the Unusual Event promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <p>1. a. An UNPLANNED event results in the inability to monitor one or more of the following parameters from within the Control Room for 15 minutes or longer.</p> <table border="1" data-bbox="149 687 1019 1185"> <thead> <tr> <th>[ BWR parameter list]</th> <th>[ PWR parameter list]</th> </tr> </thead> <tbody> <tr> <td>Reactor Power</td> <td>Reactor Power</td> </tr> <tr> <td>RPV Water Level</td> <td>RCS Level</td> </tr> <tr> <td>RPV Pressure</td> <td>RCS Pressure</td> </tr> <tr> <td>Primary Containment Pressure</td> <td>In Core/Core Exit Temperature</td> </tr> <tr> <td>Suppression Pool Level</td> <td>Levels in at least (site specific number) steam generators</td> </tr> <tr> <td>Suppression Pool Temperature</td> <td>Steam Generator Auxiliary or Emergency Feed Water Flow</td> </tr> </tbody> </table>	[ BWR parameter list]	[ PWR parameter list]	Reactor Power	Reactor Power	RPV Water Level	RCS Level	RPV Pressure	RCS Pressure	Primary Containment Pressure	In Core/Core Exit Temperature	Suppression Pool Level	Levels in at least (site specific number) steam generators	Suppression Pool Temperature	Steam Generator Auxiliary or Emergency Feed Water Flow	<p style="text-align: right;"><b>MU4</b></p> <p><b>Initiating Condition:</b></p> <p>UNPLANNED loss of Control Room indications for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>UNPLANNED event results in the inability to monitor <b>ANY</b> Table M1 parameter from within the Control Room for <b>≥ 15 minutes</b>.</p> <table border="1" data-bbox="1162 721 1939 1076"> <thead> <tr> <th>Table M1 – Control Room Parameters</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>• Reactor Power</li> <li>• PZR Level</li> <li>• RCS Pressure</li> <li>• Core Exit Temperature</li> <li>• Level in at least one Steam Generator</li> <li>• Steam Generator Auxiliary Feed Water Flow</li> </ul> </td> </tr> </tbody> </table>	Table M1 – Control Room Parameters	<ul style="list-style-type: none"> <li>• Reactor Power</li> <li>• PZR Level</li> <li>• RCS Pressure</li> <li>• Core Exit Temperature</li> <li>• Level in at least one Steam Generator</li> <li>• Steam Generator Auxiliary Feed Water Flow</li> </ul>	<p> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site specific number of steam generators to ensure timely classification.</p> <p>2) PZR Level used as the parameter that monitors RCS Level as allowed by the developer notes.</p> <p>3) Reference to in Core Temperature has been removed since the site only has ability to monitor Core Exit Temperature through the use of Core Exit Thermocouples (CETs).</p>
[ BWR parameter list]	[ PWR parameter list]																	
Reactor Power	Reactor Power																	
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NEI 99-01 Rev 6	Proposed EAL	Justification
<p><b>Initiating Condition: ALERT</b> <span style="float: right;"><b>SA9</b></span></p> <p>Hazardous event affecting a SAFETY SYSTEM needed for the current operating mode.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b></p> <p>1. a. The occurrence of <b>ANY</b> of the following hazardous events:</p> <ul style="list-style-type: none"> <li>• Seismic event (earthquake)</li> <li>• Internal or external flooding event</li> <li>• High winds or tornado strike</li> <li>• FIRE</li> <li>• EXPLOSION</li> <li>• (site-specific hazards)</li> <li>• Other events with similar hazard characteristics as determined by the Shift Manager</li> </ul> <p><b>AND</b></p> <p>b. <b>EITHER</b> of the following:</p> <p>1. Event damage has caused indications of degraded performance in at least one train of a SAFETY SYSTEM needed for the current operating mode.</p> <p><b>OR</b></p> <p>2. The event has caused <b>VISIBLE DAMAGE</b> to a SAFETY SYSTEM component or structure needed for the current operating mode.</p>	<p><b>Initiating Condition: ALERT</b> <span style="float: right;"><b>MA5</b></span></p> <p>Hazardous event affecting a SAFETY SYSTEM required for the current operating mode.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> If it is determined that the conditions of MA5 are not met then assess the event via HU3, HU4, or HU6.</p> <p>1. The occurrence of <b>ANY</b> of the following hazardous events:</p> <ul style="list-style-type: none"> <li>• Seismic event (earthquake)</li> <li>• Internal or external flooding event</li> <li>• High winds or tornado strike</li> <li>• FIRE</li> <li>• EXPLOSION</li> <li>• Other events with similar hazard characteristics as determined by the Shift Manager</li> </ul> <p><b>AND</b></p> <p>2. <b>EITHER</b> of the following:</p> <p>a. Event damage has caused indications of degraded performance in at least one train of a SAFETY SYSTEM required by Technical Specifications for the current operating mode.</p> <p><b>OR</b></p> <p>b. The event has caused <b>VISIBLE DAMAGE</b> to a SAFETY SYSTEM component or structure required by Technical Specifications for the current operating mode.</p>	<p><input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) No additional site specific hazard noted</p> <p>2) Changed the word "needed" to "required" in the IC and to "required by Technical Specification" in the EAL, to be consistent with terminology used by operators and minimize confusion.</p> <p>3) Added note to easily direct the operator to potential lesser ICs.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SU4</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>RCS leakage for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3)</p> <p><b>Note:</b> The Emergency Director should declare the Unusual Event promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>1. RCS unidentified or pressure boundary leakage greater than (site-specific value) for 15 minutes or longer.</li> <li>2. RCS identified leakage greater than (site-specific value) for 15 minutes or longer</li> <li>3. Leakage from the RCS to a location outside containment greater than 25 gpm for 15 minutes or longer</li> </ol>	<p style="text-align: right;"><b>MU6</b></p> <p><b>Initiating Condition:</b></p> <p>RCS leakage for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>1. RCS unidentified or pressure boundary leakage <b>&gt; 10 gpm</b> for <b>≥ 15 minutes.</b></li> <li style="text-align: center;"><b>OR</b></li> <li>2. RCS identified leakage <b>&gt;25 gpm</b> for <b>≥ 15 minutes.</b></li> <li style="text-align: center;"><b>OR</b></li> <li>3. Leakage from the RCS to a location outside containment <b>&gt;25 gpm</b> for <b>≥ 15 minutes.</b></li> </ol>	<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed site specific values to ensure timely classification.</p> <p>2) For EAL #1 a site-specific leak rate value of 10 gpm was used, for EAL #2 and EAL #3 a site-specific value of 25 gpm was used in accordance with guidance of NEI 99-01 Revision 6.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification																																								
<p><b>Initiating Condition: UNUSUAL EVENT</b> <span style="float: right;"><b>SU6</b></span></p> <p>Loss of all onsite or offsite communications capabilities</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3)</p> <ol style="list-style-type: none"> <li>1. Loss of <b>ALL</b> of the following onsite communication methods:  (site-specific list of communications methods)</li> <li>2. Loss of <b>ALL</b> of the following ORO communications methods:  (site-specific list of communications methods)</li> <li>3. Loss of <b>ALL</b> of the following NRC communications methods:  (site-specific list of communications methods)</li> </ol>	<p><b>Initiating Condition:</b> <span style="float: right;"><b>MU7</b></span></p> <p>Loss of all onsite or offsite communications capabilities.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <ol style="list-style-type: none"> <li>1. Loss of <b>ALL</b> Table M3 <b>Onsite</b> communications capability affecting the ability to perform routine operations. <b>OR</b></li> <li>2. Loss of <b>ALL</b> Table M3 <b>Offsite</b> communications capability affecting the ability to perform offsite notifications. <b>OR</b></li> <li>3. Loss of <b>ALL</b> Table M3 <b>NRC</b> communications capability affecting the ability to perform NRC notifications.</li> </ol> <div style="text-align: center; margin-top: 20px;"> <table border="1"> <thead> <tr> <th colspan="4">Table M3 – Communications Capability</th> </tr> <tr> <th>System</th> <th>Onsite</th> <th>Offsite</th> <th>NRC</th> </tr> </thead> <tbody> <tr> <td>Radios/Walkie Talkies</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>Plant Page System</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>Direct Dial POTS Lines (Blue Phones) System</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td>Commercial Phone System</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td>FTS 2001 telephone system (ENS,HPN)</td> <td></td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td>Control Room Hard Wired Satellite Phone</td> <td></td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td>Control Room Emergency Cell Phone</td> <td></td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td>RECS</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> </tbody> </table> </div>	Table M3 – Communications Capability				System	Onsite	Offsite	NRC	Radios/Walkie Talkies	X			Plant Page System	X			Direct Dial POTS Lines (Blue Phones) System	X	X	X	Commercial Phone System	X	X	X	FTS 2001 telephone system (ENS,HPN)		X	X	Control Room Hard Wired Satellite Phone		X	X	Control Room Emergency Cell Phone		X	X	RECS		X		<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed site specific communication methods to ensure timely classification.</p> <p>2) Added a descriptor sentence as to the ability being affected for each EAL.</p>
Table M3 – Communications Capability																																										
System	Onsite	Offsite	NRC																																							
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NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>SU7</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>Failure to isolate containment or loss of containment pressure control. [PWR]</p> <p><b>Operating Mode Applicability:</b></p> <p>Power Operation, Startup, Hot Standby, Hot Shutdown</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <ol style="list-style-type: none"> <li>1. <ol style="list-style-type: none"> <li>a. Failure of containment to isolate when required by an actuation signal.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. <b>ALL</b> required penetrations are not closed within 15 minutes of the actuation signal.</li> </ol> </li> <li>2. <ol style="list-style-type: none"> <li>a. Containment pressure greater than (site-specific pressure).</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. Less than one full train of (site-specific system or equipment) is operating per design for 15 minutes or longer.</li> </ol> </li> </ol>	<p style="text-align: right;"><b>MU8</b></p> <p><b>Initiating Condition:</b></p> <p>Failure to isolate containment or loss of containment pressure control.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4</p> <p><b>Emergency Action Levels (EAL):</b></p> <ol style="list-style-type: none"> <li>1. <ol style="list-style-type: none"> <li>a. Failure of containment to isolate when required by an actuation signal.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. <b>ANY</b> required penetration remains open &gt; <b>15 minutes</b> after the actuation signal.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>a. Containment pressure <math>\geq</math> <b>28 psig.</b></li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. <b>Either</b> of the following conditions for <math>\geq</math> <b>15 minutes:</b> <ul style="list-style-type: none"> <li>• &lt; 2 CRFC units operating</li> <li>• &lt; 1 CS pump operating</li> </ul> </li> </ol> </li> <li>2.</li> </ol>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <ol style="list-style-type: none"> <li>1) Listed site specific indications and equipment to ensure timely classification.</li> <li>2) Reworded EAL 1.b to be a positive statement</li> <li>3) Containment pressure at 28psig is the site-specific setpoint where containment energy (heat) removal systems are designed to automatically actuate. Pressures at or above this setpoint with less than one full train of containment energy (heat) removal systems in service meets this threshold. This is why the threshold is <math>\geq</math> 28 psig and not just &gt; 28psig.</li> <li>4) The following equipment is required by Ginna Technical Specifications B.3.6 Containment Systems. <ul style="list-style-type: none"> <li>Two means of post-accident containment heat removal are provided; <ul style="list-style-type: none"> <li>• Containment Spray System and</li> <li>• Containment Recirc Fan Cooler (CRFC) units.</li> </ul> </li> <li>At least one train of each of these systems is required to provide sufficient steam-condensing capacity to ensure against containment overstress and to remove residual and chemical heat.</li> </ul> </li> </ol> <p><u>CRFC Units:</u> The CRFC system is comprised of four CRFC units, two of which are required in the post-accident condition. Each containment air cooling unit consists of cooling coils, accident backdraft damper, accident fan, service water outlet valves, and controls necessary to ensure an operable service water flow path. Following an SI actuation signal, CRFC System fans are designed to start automatically.</p> <p><u>Containment Spray:</u> Each of two containment spray trains consists of a spray pump, spray header, nozzles, valves, piping, instruments, and controls to ensure an operable flow path capable of taking suction from the RWST upon an actuation signal.</p> <p>During a steam line break or LOCA, a minimum of two CRFC units and one Containment Spray (CS) pump are required to maintain peak pressure and temperature below design limits.</p> <p>The wording used in 2b is the equivalent of less than one full train of containment cooling available.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CA2</b></p> <p><b>Initiating Condition: ALERT</b> Loss of all offsite and all onsite AC power to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b> Cold Shutdown, Refueling, Defueled</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the Alert promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>Loss of <b>ALL</b> offsite and <b>ALL</b> onsite AC Power to (site-specific emergency buses) for 15 minutes or longer.</li> </ol>	<p style="text-align: right;"><b>CA1</b></p> <p><b>Initiating Condition:</b> Loss of all offsite and onsite AC power to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b> 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>Loss of <b>ALL</b> offsite and <b>ALL</b> onsite AC power to 480V safeguards buses 14 and 16.</li> </ol> <p><b>AND</b></p> <ol style="list-style-type: none"> <li>Failure to restore power to 480V safeguards bus 14 or 16 in <b>&lt; 15 minutes</b> from the time of loss of both offsite and onsite AC power.</li> </ol>	<p> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <ol style="list-style-type: none"> <li>Listed site specific buses to ensure timely classification.</li> <li>Formatted to 1 and 2 to keep the formatting consistent within the EALs.</li> </ol>



NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CU2</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b> Loss of all but one AC power source to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b> Cold Shutdown, Refueling, Defueled</p> <p><b>Example Emergency Action Levels:</b> <b>Note:</b> The Emergency Director should declare the Unusual Event promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <p>1. a. AC power capability to (site-specific emergency buses) is reduced to a single power source for 15 minutes or longer.</p> <p><b>AND</b></p> <p>b. Any additional single power source failure will result in loss of all AC power to SAFETY SYSTEMS.</p>	<p style="text-align: right;"><b>CU1</b></p> <p><b>Initiating Condition:</b> Loss of all but one AC power source to emergency buses for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b> 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b> <b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. AC power capability to 480V safeguards buses 14 and 16 reduced to only one of the following power sources for <b>≥ 15 minutes</b>.</p> <ul style="list-style-type: none"> <li>• Station Auxiliary Transformer 12A</li> <li>• Station Auxiliary Transformer 12B</li> <li>• Unit Auxiliary Transformer 11 backfeed</li> <li>• Emergency Diesel Generator EDG 1A</li> <li>• Emergency Diesel Generator EDG 1B</li> </ul> <p><b>AND</b></p> <p>2. Any additional single power source failure will result in a loss of <b>ALL</b> AC power to SAFETY SYSTEMS powered from 480V safeguards buses 14 and 16.</p>	<p> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site specific equipment and buses to ensure timely classification.</p> <p>2) Added “powered from 480V safeguards buses 14 and 16” to EAL #2 to ensure power to Safeguards Buses 17 and 18 is not considered in this EAL. Safeguards Buses 17 and 18 provide power to the four service water pumps and should not be considered in relation to EAL #2 because the availability of power to Buses 17 and 18 alone does not ensure engineered safety features required for hot shutdown and hot standby modes will be operable.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CA6</b></p> <p><b>Initiating Condition – ALERT</b></p> <p>Hazardous event affecting a SAFETY SYSTEM needed for the current operating mode.</p> <p><b>Operating Mode Applicability:</b> Cold Shutdown, Refueling</p> <p><b>Example Emergency Action Levels:</b></p> <p>1. a. The occurrence of <b>ANY</b> of the following hazardous events:</p> <ul style="list-style-type: none"> <li>• Seismic event (earthquake)</li> <li>• Internal or external flooding event</li> <li>• High winds or tornado strike</li> <li>• FIRE</li> <li>• EXPLOSION</li> <li>• (site-specific hazards)</li> <li>• Other events with similar hazard characteristics as determined by the Shift Manager</li> </ul> <p><b>AND</b></p> <p>b. <b>EITHER</b> of the following:</p> <p>1. Event damage has caused indications of degraded performance in at least one train of a SAFETY SYSTEM needed for the current operating mode.</p> <p><b>OR</b></p> <p>2. The event has caused <b>VISIBLE DAMAGE</b> to a SAFETY SYSTEM component or structure needed for the current operating mode.</p>	<p style="text-align: right;"><b>CA2</b></p> <p><b>Initiating Condition:</b></p> <p>Hazardous event affecting a SAFETY SYSTEM required for the current operating mode.</p> <p><b>Operating Mode Applicability:</b> 5, 6</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> If it is determined that the conditions of CA2 are not met then assess the event via HU3, HU4, or HU6.</p> <p>1. The occurrence of <b>ANY</b> of the following hazardous events:</p> <ul style="list-style-type: none"> <li>• Seismic event (earthquake)</li> <li>• Internal or external flooding event</li> <li>• High winds or tornado strike</li> <li>• FIRE</li> <li>• EXPLOSION</li> <li>• Other events with similar hazard characteristics as determined by the Shift Manager</li> </ul> <p><b>AND</b></p> <p>2. <b>EITHER</b> of the following:</p> <p>a. Event damage has caused indications of degraded performance in at least one train of a SAFETY SYSTEM required by Technical Specifications for the current operating mode.</p> <p><b>OR</b></p> <p>b. The event has caused <b>VISIBLE DAMAGE</b> to a SAFETY SYSTEM component or structure required by Technical Specifications for the current operating mode.</p>	<p><input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) No additional site specific hazard noted</p> <p>2) Changed the word "needed" to "required" in the IC and to "required by Technical Specification" in the EAL, to be consistent with terminology used by operators and minimize confusion.</p> <p>3) Added note to easily direct the operator to potential lesser ICs.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CU4</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b> Loss of Vital DC power for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b> Cold Shutdown, Refueling</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the Unusual Event promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <p>Indicated voltage is less than (site-specific bus voltage value) on required Vital DC buses for 15 minutes or longer.</p>	<p style="text-align: right;"><b>CU3</b></p> <p><b>Initiating Condition:</b> Loss of Vital DC power for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b> 5, 6</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>Voltage is <b>&lt; 110.6 VDC</b> on required unit 125 VDC buses 1A and 1B for <b>≥ 15 minutes</b>.</p>	<p><input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed site specific voltage and buses to ensure timely classification.</p> <p>2) Removed the word "indicated" this will allow for an indication problem to not cause confusion on the need to declare.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification																																								
<p style="text-align: right;"><b>CU5</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b> Loss of all onsite or offsite communications capabilities</p> <p><b>Operating Mode Applicability:</b> Cold Shutdown, Refueling, Defuled</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3)</p> <ol style="list-style-type: none"> <li>Loss of <b>ALL</b> of the following onsite communication methods: (site-specific list of communications methods)</li> <li>Loss of <b>ALL</b> of the following ORO communications methods: (site-specific list of communications methods)</li> <li>Loss of <b>ALL</b> of the following NRC communications methods: (site-specific list of communications methods)</li> </ol>	<p style="text-align: right;"><b>CU4</b></p> <p><b>Initiating Condition:</b> Loss of all onsite or offsite communication capabilities.</p> <p><b>Operating Mode Applicability:</b> 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <ol style="list-style-type: none"> <li>Loss of <b>ALL</b> Table C1 <b>Onsite</b> communications capability affecting the ability to perform routine operations.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>Loss of <b>ALL</b> Table C1 <b>Offsite</b> communications capability affecting the ability to perform offsite notifications.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>Loss of <b>ALL</b> Table C1 <b>NRC</b> communications capability affecting the ability to perform NRC notifications.</li> </ol> <table border="1" data-bbox="1236 852 1877 1501"> <thead> <tr> <th colspan="4">Table C1 – Communications Capability</th> </tr> <tr> <th>System</th> <th>Onsite</th> <th>Offsite</th> <th>NRC</th> </tr> </thead> <tbody> <tr> <td>Radios/Walkie Talkies</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Plant Page System</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Direct Dial POTS Lines (Blue Phones) System</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>Commercial Phone System</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>FTS 2001 telephone system (ENS,HPN)</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>Control Room Hard Wired Satellite Phone</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>Control Room Emergency Cell Phone</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>RECS</td> <td></td> <td>X</td> <td></td> </tr> </tbody> </table>	Table C1 – Communications Capability				System	Onsite	Offsite	NRC	Radios/Walkie Talkies	X			Plant Page System	X			Direct Dial POTS Lines (Blue Phones) System	X	X	X	Commercial Phone System	X	X	X	FTS 2001 telephone system (ENS,HPN)		X	X	Control Room Hard Wired Satellite Phone		X	X	Control Room Emergency Cell Phone		X	X	RECS		X		<p> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site specific communications methods to ensure timely classification</p> <p>2) Added a descriptor sentence as to the capability being affected for each EAL.</p>
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NEI 99-01 Rev 6	Proposed EAL	Justification																															
<p style="text-align: right;"><b>CA3</b></p> <p><b>Initiating Condition: ALERT</b> Inability to maintain the plant in cold shutdown.</p> <p><b>Operating Mode Applicability:</b> Cold Shutdown, Refueling</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <p><b>Note:</b> The Emergency Director should declare the Alert promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. UNPLANNED increase in RCS temperature to greater than (site-specific Technical Specification cold shutdown temperature limit) for greater than the duration specified in the following table.</p> <table border="1" data-bbox="164 671 1034 1040"> <thead> <tr> <th colspan="3">Table: RCS Heat-up Duration Thresholds</th> </tr> <tr> <th>RCS Status</th> <th>Containment Closure Status</th> <th>Heat-up Duration</th> </tr> </thead> <tbody> <tr> <td>Intact (but not at reduced Inventory [PWR])</td> <td>Not Applicable</td> <td>60 minutes*</td> </tr> <tr> <td rowspan="2">Not Intact (or at reduced inventory [PWR])</td> <td>Established</td> <td>20 minutes*</td> </tr> <tr> <td>Not Established</td> <td>0 minutes</td> </tr> </tbody> </table> <p>* If an RCS heat removal system is in operation within this time frame and RCS temperature is being reduced, the EAL is not applicable.</p> <p>2. UNPLANNED RCS pressure increase greater than (site-specific pressure reading). (This EAL does not apply during water-solid plant conditions. [PWR])</p>	Table: RCS Heat-up Duration Thresholds			RCS Status	Containment Closure Status	Heat-up Duration	Intact (but not at reduced Inventory [PWR])	Not Applicable	60 minutes*	Not Intact (or at reduced inventory [PWR])	Established	20 minutes*	Not Established	0 minutes	<p style="text-align: right;"><b>CA5</b></p> <p><b>Initiating Condition:</b> Inability to maintain plant in cold shutdown.</p> <p><b>Operating Mode Applicability:</b> 5, 6</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>A momentary UNPLANNED excursion above the Technical Specification cold shutdown temperature limit when heat removal function is available does not warrant classification.</p> <p>1. UNPLANNED rise in RCS temperature to &gt; 200°F for &gt; Table C2 duration.</p> <p><b>OR</b></p> <p>2. UNPLANNED RCS pressure rise &gt; 10 psig as a result of a temperature rise (This EAL does not apply in water-solid plant conditions.)</p> <table border="1" data-bbox="1224 862 1883 1338"> <thead> <tr> <th colspan="3">Table C2 – RCS Heat-up Duration Thresholds</th> </tr> <tr> <th>RCS Status</th> <th>Containment Closure Status</th> <th>Heat-up Duration</th> </tr> </thead> <tbody> <tr> <td>Intact</td> <td>Not Applicable</td> <td>60 minutes*</td> </tr> <tr> <td rowspan="2">Not Intact <b>OR</b></td> <td>Established</td> <td>20 minutes*</td> </tr> <tr> <td>Not Established</td> <td>0 minutes</td> </tr> <tr> <td>Reduced Inventory</td> <td>Not Established</td> <td>0 minutes</td> </tr> </tbody> </table> <p>* If an RCS heat removal system is in operation within this time frame and RCS temperature is being reduced, then EAL #1 is <b>not</b> applicable.</p>	Table C2 – RCS Heat-up Duration Thresholds			RCS Status	Containment Closure Status	Heat-up Duration	Intact	Not Applicable	60 minutes*	Not Intact <b>OR</b>	Established	20 minutes*	Not Established	0 minutes	Reduced Inventory	Not Established	0 minutes	<p><input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed site specific Technical Specification cold shutdown temperature limit to ensure timely classification.</p> <p>2) Listed site specific pressure reading to enhance timely classification.</p> <p>3) Added the following note, taken from the basis section of the EAL, to bring it to the attention of the SM/ED when using the “procedure matrix” (11x17 quick reference control room document) “A momentary UNPLANNED excursion above the Technical Specification cold shutdown temperature limit when heat removal function is available does not warrant classification.”</p> <p>4) Changed the word increase to rise in the EALs to be consistent with operations language and training.</p> <p>5) In Table C2 removed (but not RCS reduced inventory) from Intact since it was redundant to the RCS status of Not Intact or Reduced Inventory.</p>
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NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CU3</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b> UNPLANNED increase in RCS temperature.</p> <p><b>Operating Mode Applicability:</b> Cold Shutdown, Refueling</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <p><b>Note:</b> The Emergency Director should declare the Unusual Event promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>UNPLANNED increase in RCS temperature to greater than (site-specific Technical Specification cold shutdown temperature limit).</li> <li>Loss of <b>ALL</b> RCS temperature and (reactor vessel/RCS [<i>PWR</i>] or RPV [<i>BWR</i>]) level indication for 15 minutes or longer.</li> </ol>	<p style="text-align: right;"><b>CU5</b></p> <p><b>Initiating Condition:</b> UNPLANNED rise in RCS temperature.</p> <p><b>Operating Mode Applicability:</b> 5, 6</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>A momentary UNPLANNED excursion above the Technical Specification cold shutdown temperature limit when heat removal function is available does not warrant classification.</p> <ol style="list-style-type: none"> <li>UNPLANNED rise in RCS temperature to <b>&gt; 200°F</b>.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>Loss of the following for <b>≥ 15 minutes</b>. <ul style="list-style-type: none"> <li><b>ALL</b> RCS temperature indications</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li><b>ALL</b> RCS level indications</li> </ul> </li> </ol>	<p> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site specific Technical Specification cold shutdown temperature limit to ensure timely classification.</p> <p>2) Changed the word increase to rise in the initiating condition and the EALs to be consistent with operations language and training.</p> <p>3) Added the following note, taken from the basis section of the EAL, to bring it to the attention of the SM/ED when using the "procedure matrix" (11x17 quick reference control room document) "A momentary UNPLANNED excursion above the Technical Specification cold shutdown temperature limit when heat removal function is available does not warrant classification."</p>

NEI 99-01 Rev 6	Proposed EAL	Justification									
<p style="text-align: right;"><b>CG1</b></p> <p><b>Initiating Condition: GENERAL EMERGENCY</b></p> <p>Loss of (reactor vessel/RCS [<i>PWR</i>] or RPV [<i>BWR</i>]) inventory affecting fuel clad integrity with containment challenged.</p> <p><b>Operating Mode Applicability:</b></p> <p>Cold Shutdown, Refueling</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <p><b>Note:</b> The Emergency Director should declare the General Emergency promptly upon determining that 30 minutes has been exceeded, or will likely be exceeded.</p> <p>1. a. (Reactor vessel/RCS [<i>PWR</i>] or RPV [<i>BWR</i>]) level less than (site-specific level) for 30 minutes or longer.</p> <p style="padding-left: 20px;"><b>AND</b></p> <p>b. <b>ANY</b> indication from the Containment Challenge Table (See below)</p> <p>2. a.. (Reactor vessel/RCS [<i>PWR</i>] or RPV [<i>BWR</i>]) level cannot be monitored for 30 minutes or longer.</p> <p style="padding-left: 20px;"><b>AND</b></p> <p>b. Core uncover is indicated by <b>ANY</b> of the following:</p> <ul style="list-style-type: none"> <li>• (Site-specific radiation monitor) reading greater than (site-specific value)</li> <li>• Erratic source range monitor indication [<i>PWR</i>]</li> <li>• UNPLANNED increase in (site-specific sump and/or tank) levels of sufficient magnitude to indicate core uncover</li> <li>• (Other site-specific indications)</li> </ul> <p style="padding-left: 20px;"><b>AND</b></p> <p>c. <b>ANY</b> indication from the Containment Challenge Table (See below).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Containment Challenge Table</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>• CONTAINMENT CLOSURE not established*</li> <li>• (Explosive mixture) exists inside containment</li> <li>• UNPLANNED increase in containment pressure</li> <li>• Secondary containment radiation monitor reading above (site-specific value) [<i>BWR</i>]</li> </ul> </td> </tr> <tr> <td> <p>* If CONTAINMENT CLOSURE is re-established prior to exceeding the 30-minute time limit, then declaration of a General Emergency is not required.</p> </td> </tr> </tbody> </table>	Containment Challenge Table	<ul style="list-style-type: none"> <li>• CONTAINMENT CLOSURE not established*</li> <li>• (Explosive mixture) exists inside containment</li> <li>• UNPLANNED increase in containment pressure</li> <li>• Secondary containment radiation monitor reading above (site-specific value) [<i>BWR</i>]</li> </ul>	<p>* If CONTAINMENT CLOSURE is re-established prior to exceeding the 30-minute time limit, then declaration of a General Emergency is not required.</p>	<p style="text-align: right;"><b>CG6</b></p> <p><b>Initiating Condition:</b></p> <p>Loss of Reactor Vessel / RCS inventory affecting fuel clad integrity with containment challenged.</p> <p><b>Operating Mode Applicability:</b></p> <p>5, 6</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. a. 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NEI 99-01 Rev 6	Proposed EAL	Justification			
<p style="text-align: right;"><b>CS1</b></p> <p><b>Initiating Condition: SITE AREA EMERGENCY</b></p> <p>Loss of (reactor vessel/RCS [PWR] or RPV [BWR]) inventory affecting core decay heat removal capability.</p> <p><b>Operating Mode Applicability:</b></p> <p>Cold Shutdown, Refueling</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3)</p> <p><b>Note:</b> The Emergency Director should declare the Site Area Emergency promptly upon determining that 30 minutes has been exceeded, or will likely be exceeded.</p> <p>1. a. CONTAINMENT CLOSURE not established.</p> <p><b>AND</b></p> <p>b. (Reactor vessel/RCS [PWR] or RPV [BWR]) level less than (site-specific level).</p> <p>2. a. CONTAINMENT CLOSURE established.</p> <p><b>AND</b></p> <p>b. (Reactor vessel/RCS [PWR] or RPV [BWR]) level less than (site-specific level).</p> <p>3. a. (Reactor vessel/RCS [PWR] or RPV [BWR]) level cannot be monitored for 30 minutes or longer.</p> <p><b>AND</b></p> <p>b. Core uncover is indicated by <b>ANY</b> of the following:</p> <ul style="list-style-type: none"> <li>• (Site-specific radiation monitor) reading greater than (site-specific value)</li> <li>• Erratic source range monitor indication [PWR]</li> <li>• UNPLANNED increase in (site-specific sump and/or tank) levels of sufficient magnitude to indicate core uncover</li> <li>• (Other site-specific indications)</li> </ul>	<p style="text-align: right;"><b>CS6</b></p> <p><b>Initiating Condition:</b></p> <p>Loss of Reactor Vessel / RCS inventory affecting core decay heat removal capability.</p> <p><b>Operating Mode Applicability:</b></p> <p>5, 6</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. a. Reactor Vessel / RCS level <b>cannot</b> be monitored for <b>≥ 30 minutes</b>.</p> <p><b>AND</b></p> <p>b. Core uncover is indicated by <b>ANY</b> of the following:</p> <ul style="list-style-type: none"> <li>• Table C3 indications of a sufficient magnitude to indicate core uncover.</li> <li><b>OR</b></li> <li>• Erratic Source Range Neutron Monitor indication.</li> <li><b>OR</b></li> <li>• Containment Radiation R-29 or R-30 <b>≥ 3 R/hr</b>.</li> </ul> <table border="1" data-bbox="1215 883 1898 1215" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Table C3 - Indications of RCS Leakage</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"> <ul style="list-style-type: none"> <li>• UNPLANNED Containment Sump A level rise*</li> <li>• UNPLANNED Containment Sump B level rise*</li> <li>• UNPLANNED Auxiliary Bldg. Sump/Tank level rise*</li> <li>• UNPLANNED RCDT level rise*</li> <li>• UNPLANNED rise in RCS makeup</li> <li>• Observation of leakage or inventory loss</li> </ul> </td> </tr> <tr> <td style="text-align: center;"> <p>*Rise in level is attributed to a loss of Reactor Vessel / RCS inventory.</p> </td> </tr> </tbody> </table>	Table C3 - Indications of RCS Leakage	<ul style="list-style-type: none"> <li>• UNPLANNED Containment Sump A level rise*</li> <li>• UNPLANNED Containment Sump B level rise*</li> <li>• UNPLANNED Auxiliary Bldg. Sump/Tank level rise*</li> <li>• UNPLANNED RCDT level rise*</li> <li>• UNPLANNED rise in RCS makeup</li> <li>• Observation of leakage or inventory loss</li> </ul>	<p>*Rise in level is attributed to a loss of Reactor Vessel / RCS inventory.</p>	<p style="text-align: center;"> <input type="checkbox"/> No Change     <input checked="" type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <p>1) EAL 1 not included as per guidance in developer notes since 6" below bottom ID of RCS loop is below level indication lowest value.</p> <p>2) EAL 2 not included as per guidance in developer notes since top of active fuel is below level indication lowest value.</p> <p>3) Listed site specific radiation monitors to ensure timely classification</p> <p>4) Listed site specific sumps and tanks to ensure timely classification</p> <p>5) EALs 1 and 2 are not used as per guidance in NEI 99-01 Revision 6, since this removes all reference to CONTAINMENT CLOSURE; the following paragraph was removed from the basis section.</p> <p style="padding-left: 40px;">“Outage/shutdown contingency plans typically provide for re-establishing or verifying CONTAINMENT CLOSURE following a loss of heat removal or RCS inventory control functions.”</p>
Table C3 - Indications of RCS Leakage					
<ul style="list-style-type: none"> <li>• UNPLANNED Containment Sump A level rise*</li> <li>• UNPLANNED Containment Sump B level rise*</li> <li>• UNPLANNED Auxiliary Bldg. Sump/Tank level rise*</li> <li>• UNPLANNED RCDT level rise*</li> <li>• UNPLANNED rise in RCS makeup</li> <li>• Observation of leakage or inventory loss</li> </ul>					
<p>*Rise in level is attributed to a loss of Reactor Vessel / RCS inventory.</p>					



NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CA1</b></p> <p><b>Initiating Condition: ALERT</b> Loss of (reactor vessel/RCS [PWR] or RPV [BWR]) inventory</p> <p><b>Operating Mode Applicability:</b> Cold Shutdown, Refueling</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <p><b>Note:</b> The Emergency Director should declare the Alert promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>1. Loss of (reactor vessel/RCS [PWR] or RPV [BWR]) inventory as indicated by level less than (site-specific level).</li> <li>2. a. (Reactor vessel/RCS [PWR] or RPV [BWR]) level cannot be monitored for 15 minutes or longer</li> </ol> <p><b>AND</b></p> <ol style="list-style-type: none"> <li>b. UNPLANNED increase in (site-specific sump and/or tank) levels due to a loss of (reactor vessel/RCS [PWR] or RPV [BWR]) inventory.</li> </ol>	<p style="text-align: right;"><b>CA6</b></p> <p><b>Initiating Condition:</b> Loss of Reactor Vessel / RCS inventory</p> <p><b>Operating Mode Applicability:</b> 5, 6</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>1. Loss of Reactor Vessel / RCS inventory as indicated by RCS water level <b>&lt; 6 in. on Loop B indicator (LI432B) OR Loop A compensated indication (LI-432A corrected).</b></li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>2. a. Reactor Vessel / RCS level <b>cannot</b> be monitored for <b>≥ 15 minutes.</b></li> </ol> <p><b>AND</b></p> <ol style="list-style-type: none"> <li>b. Loss of Reactor Vessel / RCS inventory per Table C3 indications.</li> </ol> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"><b>Table C3 - Indications of RCS Leakage</b></p> <ul style="list-style-type: none"> <li>UNPLANNED Containment Sump A level rise*</li> <li>UNPLANNED Containment Sump B level rise*</li> <li>UNPLANNED Auxiliary Bldg. Sump/Tank level rise*</li> <li>UNPLANNED RCDT level rise*</li> <li>UNPLANNED rise in RCS makeup</li> <li>Observation of leakage or inventory loss</li> </ul> <p style="font-size: small;">*Rise in level is attributed to a loss of Reactor Vessel / RCS inventory.</p> </div>	<p style="text-align: center;"> <input type="checkbox"/> No Change     <input checked="" type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <p>1) Listed site specific levels to ensure timely classification. The developer notes indicate the minimum allowable level that supports operation of the RHR system. The levels were chosen to be consistent with the developer notes and the site operating procedures.</p> <p>2) Listed site specific sumps and tanks to ensure timely classification.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>CU1</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>UNPLANNED loss of (reactor vessel/RCS [PWR] or RPV [BWR]) inventory for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>Cold Shutdown, Refueling</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <p><b>Note:</b> The Emergency Director should declare the Unusual Event promptly upon determining that 15 minutes has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>1. UNPLANNED loss of reactor coolant results in (reactor vessel/RCS [PWR] or RPV [BWR]) level less than a required lower limit for 15 minutes or longer.</li> <li>2. a. (Reactor vessel/RCS [PWR] or RPV [BWR]) level cannot be monitored.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. UNPLANNED increase in (site-specific sump and/or tank) levels.</li> </ol>	<p style="text-align: right;"><b>CU6</b></p> <p><b>Initiating Condition:</b></p> <p>UNPLANNED loss of Reactor Vessel / RCS inventory for 15 minutes or longer.</p> <p><b>Operating Mode Applicability:</b></p> <p>5, 6</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>1. UNPLANNED loss of reactor coolant results in the inability to restore and maintain Reactor Vessel / RCS level to &gt; <b>procedurally established lower limit</b> for <math>\geq 15</math> minutes.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. a. Reactor Vessel / RCS level <b>cannot</b> be monitored.</li> </ol> <p style="text-align: center;"><b>AND</b></p> <ol style="list-style-type: none"> <li>b. Loss of Reactor Vessel / RCS inventory per Table C3 indications</li> </ol> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;"><b>Table C3 - Indications of RCS Leakage</b></p> <ul style="list-style-type: none"> <li>UNPLANNED Containment Sump A level rise*</li> <li>UNPLANNED Containment Sump B level rise*</li> <li>UNPLANNED Auxiliary Bldg. Sump/Tank level rise*</li> <li>UNPLANNED RCDT level rise*</li> <li>UNPLANNED rise in RCS makeup</li> <li>Observation of leakage or inventory loss</li> </ul> <p>*Rise in level is attributed to a loss of Reactor Vessel / RCS inventory.</p> </div>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site specific sumps and tanks to ensure timely classification.</p> <p>2) Described "a required lower limit" as a procedurally established lower limit. This is consistent with the basis discussion in NEI 99-01 Rev 6 CU1 due to variable limits.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HG1</b></p> <p><b>Initiating Condition: GENERAL EMERGENCY</b></p> <p>HOSTILE ACTION resulting in loss of physical control of the facility.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <p>1. a. A HOSTILE ACTION is occurring or has occurred within the PROTECTED AREA as reported by the (site-specific security shift supervision).</p> <p style="padding-left: 40px;"><b>AND</b></p> <p>b. <b>EITHER</b> of the following has occurred:</p> <p style="padding-left: 80px;">1. <b>ANY</b> of the following safety functions cannot be controlled or maintained.</p> <ul style="list-style-type: none"> <li>▪ Reactivity control</li> <li>▪ Core cooling [<i>PWR</i>] / RPV water level [<i>BWR</i>]</li> <li>▪ RCS heat removal</li> </ul> <p style="padding-left: 80px;"><b>OR</b></p> <p style="padding-left: 80px;">2. Damage to spent fuel has occurred or is IMMIDENT</p>	<p style="text-align: right;"><b>HG1</b></p> <p>Not Used</p>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input checked="" type="checkbox"/> Deviation </p> <p>EAL HG1 has two distinct parts, they will be addressed separately as follows:</p> <p>1. Hostile Action in the Protected Area is bounded by EALs HS1 and HS7. Hostile Action resulting in a loss of physical control is bound by EAL HG7, as well as any event that may lead to radiological releases to the public in excess of Environmental Protection Agency (EPA) Protective Action Guides (EPA PAGs).</p> <ul style="list-style-type: none"> <li>a. If, for whatever reason, the Control Room (CR) must be evacuated, and control of safety functions (reactivity control, core cooling (PWR) cannot be reestablished, then EAL HS6 would apply, as well as EAL HS7 if desired by the EAL decision-maker.</li> <li>b. Also, as stated above, any event (including Hostile Action) that could reasonably be expected to have a release exceeding EPA PAGs would be bound by EAL HG7.</li> <li>c. From a Hostile Action perspective, EALs HS1, HS7, and HG7 are appropriate and therefore makes this part of HG1 redundant and unnecessary.</li> <li>d. From a loss of physical control perspective, EALs HS6, HS7, and HG7 are appropriate and therefore makes this part of EAL HG1 redundant and unnecessary.</li> </ul> <p>2. Any event which causes a loss of spent fuel pool level will be bounded by EALs AA2, AS2, and AG2 (Exelon RG2, RS2 and RA2) regardless of whether it was based upon a Hostile Action or not, thus making this part of HG1 redundant and unnecessary.</p> <ul style="list-style-type: none"> <li>a. An event that leads to a radiological release will be bounded by EALs AU1, AA1, AS1, and AG1 (Exelon RG1, RS1, RA1 and RU1). Events that lead to radiological releases in excess of EPA PAGs will be bounded by EALs AG1 (Exelon RG1) and HG7, thus making this part of EAL HG1 redundant and unnecessary.</li> </ul>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HS1</b></p> <p><b>Initiating Condition: SITE AREA EMERGENCY</b></p> <p>HOSTILE ACTION within the PROTECTED AREA.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <p>A HOSITLE ACTION is occurring or has occurred within the PROTECTED AREA as reported by the (site-security shift supervision).</p>	<p style="text-align: right;"><b>HS1</b></p> <p><b>Initiating Condition:</b></p> <p>HOSTILE ACTION within the PROTECTED AREA.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p>A notification from the Security Force that a HOSTILE ACTION is occurring or has occurred within the PROTECTED AREA.</p>	<p> <input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) List site security shift supervision as Security Force.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HA1</b></p> <p><b>Initiating Condition: ALERT</b></p> <p>HOSTILE ACTION within the OWNER CONTROLLED AREA or airborne attack threat within 30 minutes.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b> (1 or 2)</p> <ol style="list-style-type: none"> <li>1. A HOSTILE ACTION is occurring or has occurred within the OWNER CONTROLLED AREA as reported by the (site-specific security shift supervision).</li> <li>2. A validated notification from NRC of an aircraft attack threat within 30 minutes of the site.</li> </ol>	<p style="text-align: right;"><b>HA1</b></p> <p><b>Initiating Condition:</b></p> <p>HOSTILE ACTION within the OWNER CONTROLLED AREA or airborne attack threat within 30 minutes.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <ol style="list-style-type: none"> <li>1. A validated notification from NRC of an aircraft attack threat &lt; <b>30 minutes</b> from the site.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. Notification by the Security Force that a HOSTILE ACTION is occurring or has occurred within the OWNER CONTROLLED AREA.</li> </ol>	<p> <input checked="" type="checkbox"/> No Change         <input type="checkbox"/> Difference         <input type="checkbox"/> Deviation       </p> <p>1) List site security shift supervision as Security Force.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p data-bbox="111 96 1069 131"><b>Initiating Condition: UNUSUAL EVENT</b> <span style="float: right;"><b>HU1</b></span></p> <p data-bbox="111 191 1069 225">Confirmed SECURITY CONDITION or threat.</p> <p data-bbox="111 262 1069 296"><b>Operating Mode Applicability:</b></p> <p data-bbox="111 332 1069 366">All</p> <p data-bbox="111 403 1069 437"><b>Example Emergency Action Levels:</b> (1 or 2 or 3)</p> <ol data-bbox="111 473 1069 796" style="list-style-type: none"> <li>1. A SECURITY CONDITION that does not involve a HOSTILE ACTION as reported by the (site-specific security shift supervision).</li> <li>2. Notification of a credible security threat directed at the site.</li> <li>3. A validated notification from the NRC providing information of an aircraft threat.</li> </ol>	<p data-bbox="1069 96 2032 131"><b>Initiating Condition:</b> <span style="float: right;"><b>HU1</b></span></p> <p data-bbox="1069 191 2032 225">Confirmed SECURITY CONDITION or threat.</p> <p data-bbox="1069 262 2032 296"><b>Operating Mode Applicability:</b></p> <p data-bbox="1069 332 2032 366">1, 2, 3, 4, 5, 6, D</p> <p data-bbox="1069 403 2032 437"><b>Emergency Action Levels (EAL):</b></p> <ol data-bbox="1069 473 2032 796" style="list-style-type: none"> <li>1. Notification of a credible security threat directed at the site as determined per SY-AA-101-132, Security Assessment and Response to Unusual Activities.</li> <li><b>OR</b></li> <li>2. A validated notification from the NRC providing information of an aircraft threat.</li> <li><b>OR</b></li> <li>3. Notification by the Security Force of a SECURITY CONDITION that does <b>not</b> involve a HOSTILE ACTION.</li> </ol>	<p data-bbox="2032 96 2993 131"> <input checked="" type="checkbox"/> No Change     <input type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <p data-bbox="2032 231 2993 266">1) List site security shift supervision as Security Force.</p> <p data-bbox="2032 292 2993 352">2) Further described credible security threat through listing a site specific procedure.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification		
<p style="text-align: right;"><b>HS6</b></p> <p><b>Initiating Condition: SITE AREA EMERGENCY</b></p> <p>Inability to control a key safety function from outside the Control Room.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> The Emergency Director should declare the Site Area Emergency promptly upon determining that (site-specific number of minutes) has been exceeded, or will likely be exceeded.</p> <p>1. a. An event has resulted in plant control being transferred from the Control Room to (site-specific remote shutdown panels and local control stations). <b>AND</b> b. Control of <b>ANY</b> of the following key safety functions is not reestablished within (site-specific number of minutes).</p> <ul style="list-style-type: none"> <li>▪ Reactivity control</li> <li>▪ Core cooling [<i>PWR</i>] / RPV water level [<i>BWR</i>]</li> <li>▪ RCS heat removal</li> </ul>	<p style="text-align: right;"><b>HS2</b></p> <p><b>Initiating Condition:</b></p> <p>Inability to control a key safety function from outside the Control Room.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>1. A Control Room evacuation has resulted in plant control being transferred from the Control Room to alternate locations per AP-CR.1 or the ER-FIRE series. <b>AND</b> 2. Control of <b>ANY</b> Table H1 key safety function is <b>not</b> reestablished in <b>≤ 35 minutes</b>.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Table H1 – Safety Functions</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>• Reactivity Control (ability to shutdown the reactor and keep it shutdown)</li> <li>• Core Cooling (ability to cool the core)</li> <li>• RCS Heat Removal (ability to maintain heat sink)</li> </ul> </td> </tr> </tbody> </table>	Table H1 – Safety Functions	<ul style="list-style-type: none"> <li>• Reactivity Control (ability to shutdown the reactor and keep it shutdown)</li> <li>• Core Cooling (ability to cool the core)</li> <li>• RCS Heat Removal (ability to maintain heat sink)</li> </ul>	<p><input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) EAL uses the site specific Control Room evacuation procedures to effectively list all of the alternate locations, panels, and stations requested by the developer notes. These would be the procedures the Control Room would enter should such an event occur, this allows for greater clarity as to when this EAL would apply than if each panel and station used in alternate shutdown were to be listed,</p> <p>2) Added descriptors to better explain each safety function and allow for a timely classification.</p> <p>3) Changed "An event" to "A Control Room evacuation" to remove confusion if partial plant control was transferred to outside the control room with the control room still manned, due to testing or equipment failure.</p>
Table H1 – Safety Functions				
<ul style="list-style-type: none"> <li>• Reactivity Control (ability to shutdown the reactor and keep it shutdown)</li> <li>• Core Cooling (ability to cool the core)</li> <li>• RCS Heat Removal (ability to maintain heat sink)</li> </ul>				

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HA6</b></p> <p><b>Initiating Condition: ALERT</b></p> <p>Control Room evacuation resulting in transfer of plant control to alternate locations.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <ol style="list-style-type: none"> <li>1. An event has resulted in plant control being transferred from the Control Room to (site-specific remote shutdown panels and local control stations).</li> </ol>	<p style="text-align: right;"><b>HA2</b></p> <p><b>Initiating Condition:</b></p> <p>Control Room evacuation resulting in transfer of plant control to alternate locations.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p>A Control Room evacuation has resulted in plant control being transferred from the Control Room to alternate locations per AP-CR.1 or the ER-FIRE series.</p>	<p> <input type="checkbox"/> No Change     <input checked="" type="checkbox"/> Difference     <input type="checkbox"/> Deviation </p> <p>1) EAL uses the site specific Control Room evacuation procedures to effectively list all of the alternate locations, panels, and stations requested by the developer notes. These would be the procedures the Control Room would enter should such an event occur, this allows for greater clarity as to when this EAL would apply than if each panel and station used in alternate shutdown were to be listed,</p> <p>2) Changed "An event" to "A Control Room evacuation" to remove confusion if partial plant control was transferred to outside the control room with the control room still manned, due to testing or equipment failure.</p>



NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HU4</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>FIRE potentially degrading the level of safety of the plant.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3 or 4)</p> <p><b>Note:</b> The Emergency Director should declare the Unusual Event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <ol style="list-style-type: none"> <li>1. a. A FIRE is NOT extinguished within 15-minutes of <b>ANY</b> of the following FIRE detection indications: <ul style="list-style-type: none"> <li>• Report from the field (i.e., visual observation)</li> <li>• Receipt of multiple (more than 1) fire alarms or indications</li> <li>• Field verification of a single fire alarm</li> </ul> <p style="text-align: center;"><b>AND</b></p> </li> <li>b. The FIRE is located within ANY of the following plant rooms or areas: (site-specific list of plant rooms or areas)</li> <li>2. a. Receipt of a single fire alarm (i.e., no other indications of a FIRE). <p style="text-align: center;"><b>AND</b></p> </li> <li>b. The FIRE is located within <b>ANY</b> of the following plant rooms or areas: (site-specific list of plant rooms or areas) <p style="text-align: center;"><b>AND</b></p> </li> <li>c. The existence of a FIRE is not verified within 30-minutes of alarm receipt.</li> <li>3. A FIRE within the plant or ISFSI [<i>for plants with an ISFSI outside the plant Protected Area</i>] PROTECTED AREA not extinguished within 60-minutes of the initial report, alarm or indication.</li> <li>4. A FIRE within the plant or ISFSI [<i>for plants with an ISFSI outside the plant Protected Area</i>] PROTECTED AREA that requires firefighting support by an offsite fire response agency to extinguish.</li> </ol>	<p style="text-align: right;"><b>HU3</b></p> <p><b>Initiating Condition:</b></p> <p>FIRE potentially degrading the level of safety of the plant.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> The Emergency Director should declare the event promptly upon determining that the applicable time has been exceeded, or will likely be exceeded.</p> <p>Potential escalation of the emergency classification level would be via IC CA2 or MA5</p> <ol style="list-style-type: none"> <li>1. A FIRE in <b>ANY</b> Table H2 area is <b>not</b> extinguished in <b>&lt; 15 minutes</b> of <b>ANY</b> of the following FIRE detection indications: <ul style="list-style-type: none"> <li>• Report from the field (i.e., visual observation)</li> <li>• Receipt of multiple (more than 1) fire alarms or indications</li> <li>• Field verification of a single fire alarm</li> </ul> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;"><b>Table H2 – Vital Areas</b></p> <ul style="list-style-type: none"> <li>• Reactor Containment Building</li> <li>• Auxiliary Building</li> <li>• Control Building</li> <li>• Intermediate Building</li> <li>• Emergency Diesel Buildings</li> <li>• SAFW Building</li> <li>• Screenhouse</li> <li>• Cable Tunnel</li> <li>• Battery Rooms</li> </ul> </div> </li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. a. Receipt of a single fire alarm in <b>ANY</b> Table H2 area (i.e., no other indications of a FIRE). <p style="text-align: center;"><b>AND</b></p> </li> <li>b. The existence of a FIRE is <b>not</b> verified in <b>&lt; 30 minutes</b> of alarm receipt.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>3. A FIRE within the plant PROTECTED AREA not extinguished in <b>&lt; 60 minutes</b> of the initial report, alarm or indication.</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>4. A FIRE within the plant PROTECTED AREA that requires firefighting support by an offsite fire response agency to extinguish.</li> </ol>	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <ol style="list-style-type: none"> <li>1) Listed site specific list of plant rooms or areas that contain SAFETY SYSTEM equipment to ensure timely classification.</li> <li>2) Incorporated 1.b into 1.a, and 2.b into 2.a</li> <li>3) The site ISFSI is located within the plant protected area as such it is not specifically addressed in EAL #3 and #4. This is in accordance with the developer notes.</li> <li>4) Added note to easily direct the operator to the potential escalation ICs.</li> </ol>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HU2</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>Seismic event greater than OBE levels.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <p>1. Seismic event greater than Operating Basis Earthquake (OBE) as indicated by: (site-specific indication that a seismic event met or exceeded OBE limits)</p>	<p style="text-align: right;"><b>HU4</b></p> <p><b>Initiating Condition:</b></p> <p>Seismic event greater than OBE levels.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> Potential escalation of the emergency classification level would be via IC CA2 or MA5</p> <p>For emergency classification if EAL #2 first three bullets are not able to be confirmed, then the occurrence of a seismic event is confirmed in manner deemed appropriate by the Shift Manager or Emergency Director in <b>≤ 15 mins</b> of the event.</p> <p>1. Control Room personnel feel an actual or potential seismic event.</p> <p><b>AND</b></p> <p>2. <b>ANY</b> one of the following confirmed in <b>≤ 15 mins</b> of the event:</p> <ul style="list-style-type: none"> <li>• The earthquake resulted in Modified Mercalli Intensity (MMI) <b>≥ VI</b> and occurred <b>≤ 3.5 miles</b> of the plant.</li> <li>• The earthquake was magnitude <b>≥ 6.0</b></li> <li>• The earthquake was magnitude <b>≥ 5.0</b> and occurred <b>≤ 125 miles</b> of the plant.</li> <li>• If the above bullets are not able to be confirmed, then the occurrence of a seismic event is confirmed in manner deemed appropriate by the Shift Manager or Emergency Director.</li> </ul>	<p> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed site specific indication to determining OBE limits have been met or exceeded to ensure timely classification.</p> <p>2) A difference to HU4.2 has been taken to make use of guidance contained in Reg Guide 1.166, Pre-earthquake Planning and Immediate Nuclear Power Plant Operator Post-earthquake Actions, Appendix A that provides guidance to plants without OBE seismic detection on applicable OBE determination. The revised HU4 EAL ensures that the SM/ED will make a timely determination by placing a 15 min clock on the ability to gain additional information through the addition of a note.</p> <p>3) Added note to easily direct the operator to the potential escalation ICs.</p>

NEI 99-01 Rev 6	Proposed EAL	Justification								
<p style="text-align: right;"><b>HA5</b></p> <p><b>Initiating Condition: ALERT</b></p> <p>Gaseous release impeding access to equipment necessary for normal plant operations, cooldown or shutdown.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <p><b>Note:</b> If the equipment in the listed room or area was already inoperable or out of service before the event occurred, then no emergency classification is warranted.</p> <p>1. a. Release of a toxic, corrosive, asphyxiant or flammable gas into any of the following plant rooms or areas: (site-specific list of plant rooms or areas with entry-related mode applicability identified)</p> <p style="text-align: center;"><b>AND</b></p> <p>b. Entry into the room or area is prohibited or impeded.</p>	<p style="text-align: right;"><b>HA5</b></p> <p><b>Initiating Condition:</b></p> <p>Gaseous release impeding access to equipment necessary for normal plant operations, cooldown or shutdown.</p> <p><b>Operating Mode Applicability:</b></p> <p>3, 4, 5</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> If the equipment in the listed room or area was already inoperable or out of service before the event occurred, then no emergency classification is warranted.</p> <p>1. Release of a toxic, corrosive, asphyxiant or flammable gas in <b>ANY</b> Table H3 area.</p> <table border="1" data-bbox="1302 707 1805 1116" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;"><b>Table H3 Areas with Entry Related Mode Applicability</b></th> </tr> <tr> <th style="text-align: center;"><b>Area</b></th> <th style="text-align: center;"><b>Entry Related Mode Applicability</b></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Auxiliary Building Top Floor</td> <td rowspan="3" style="text-align: center;">Mode 3, 4 and 5</td> </tr> <tr> <td style="text-align: center;">Auxiliary Building Middle Level</td> </tr> <tr> <td style="text-align: center;">Auxiliary Building Basement</td> </tr> </tbody> </table> <p style="text-align: center;"><b>AND</b></p> <p>2. Entry into the room or area is prohibited or impeded.</p>	<b>Table H3 Areas with Entry Related Mode Applicability</b>		<b>Area</b>	<b>Entry Related Mode Applicability</b>	Auxiliary Building Top Floor	Mode 3, 4 and 5	Auxiliary Building Middle Level	Auxiliary Building Basement	<p style="text-align: center;"> <input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation </p> <p>1) Listed plant specific rooms and areas with entry related mode applicability to ensure timely classification.</p> <p>2) Restricted Mode applicability to the modes applicable to Table H3.</p> <p>3) Additional discussion added to the basis section describing Table R4 as follows:</p> <p style="padding-left: 20px;">“This IC addresses an event involving a release of a hazardous gas that precludes or impedes access to equipment necessary to transition the plant from normal plant operation to cooldown and shutdown as specified in normal plant procedures. This condition represents an actual or potential substantial degradation of the level of safety of the plant.</p> <p style="padding-left: 20px;"><i>Assuming all plant equipment is operating as designed, normal operation is capable from the Main Control Room (MCR). The plant is also able to transition into a hot shutdown condition from the MCR, therefore Table H3 is a list of plant rooms or areas with entry-related mode applicability that contain equipment which require a manual/local action necessary to transition the plant from normal plant operation to cooldown and shutdown as specified in normal operating procedures (establish shutdown cooling), where if this action is not completed the plant would not be able to attain and maintain cold shutdown.</i></p> <p style="padding-left: 20px;"><i>This Table does not include rooms or areas for which entry is required solely to perform actions of an administrative or record keeping nature (e.g., normal rounds or routine inspections).</i></p> <p style="padding-left: 20px;"><i>This Table does not include the Control Room since adequate engineered safety/design features are in place to preclude a Control Room evacuation due to the release of a hazardous gas.”</i></p>
<b>Table H3 Areas with Entry Related Mode Applicability</b>										
<b>Area</b>	<b>Entry Related Mode Applicability</b>									
Auxiliary Building Top Floor	Mode 3, 4 and 5									
Auxiliary Building Middle Level										
Auxiliary Building Basement										

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HU3</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>Hazardous event.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b> (1 or 2 or 3 or 4 or 5)</p> <p><b>Note:</b> EAL #4 does not apply to routine traffic impediments such as fog, snow, ice, or vehicle breakdowns or accidents.</p> <ol style="list-style-type: none"> <li>1. A tornado strike within the PROTECTED AREA.</li> <li>2. Internal room or area flooding of a magnitude sufficient to require manual or automatic electrical isolation of a SAFETY SYSTEM component needed for the current operating mode.</li> <li>3. Movement of personnel within the PROTECTED AREA is impeded due to an offsite event involving hazardous materials (e.g., an offsite chemical spill or toxic gas release).</li> <li>4. A hazardous event that results in on-site conditions sufficient to prohibit the plant staff from accessing the site via personal vehicles.</li> <li>5. (Site-specific list of natural or technological hazard events)</li> </ol>	<p style="text-align: right;"><b>HU6</b></p> <p><b>Initiating Condition:</b></p> <p>Hazardous Event</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p><b>Note:</b> EAL #4 does not apply to routine traffic impediments such as fog, snow, ice, or vehicle breakdowns or accidents.</p> <p>Potential escalation of the emergency classification level would be via IC CA2 or MA5</p> <ol style="list-style-type: none"> <li>1. Tornado strike within the PROTECTED AREA.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>2. Internal room or area flooding of a magnitude sufficient to require manual or automatic electrical isolation of a SAFETY SYSTEM component required by Technical Specifications for the current operating mode.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>3. Movement of personnel within the PROTECTED AREA is impeded due to an offsite event involving hazardous materials (e.g., an offsite chemical spill or toxic gas release).</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>4. A hazardous event that results in on-site conditions sufficient to prohibit the plant staff from accessing the site via personal vehicles.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>5. Lake Level <math>\geq</math> 252 ft.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>6. Screenhouse suction bay water level &lt; 19 ft. or &lt; 17.5 ft. by manual measurement.</li> </ol>	<p><input type="checkbox"/> No Change    <input checked="" type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <ol style="list-style-type: none"> <li>1) Listed site specific list of natural or technological hazard events .</li> <li>2) Changed the word "needed" to "required by Technical Specifications" in the EAL to be consistent with terminology used by operators and minimize confusion.</li> <li>3) Added note to easily direct the operator to the potential escalation ICs.</li> <li>4) Added site specific hazards of lake level and screenhouse level.</li> </ol>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HG7</b></p> <p><b>Initiating Condition: GENERAL EMERGENCY</b></p> <p>Other conditions exist which in the judgment of the Emergency Director warrant declaration of a General Emergency.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <ol style="list-style-type: none"> <li>Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which involve actual or IMMEDIATE substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.</li> </ol>	<p style="text-align: right;"><b>HG7</b></p> <p><b>Initiating Condition:</b></p> <p>Other conditions exist which in the judgment of the Emergency Director warrant declaration of a General Emergency.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p>Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which involve actual or IMMEDIATE substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels off-site for more than the immediate site area.</p>	<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HS7</b></p> <p><b>Initiating Condition: SITE AREA EMERGENCY</b></p> <p>Other conditions exist which in the judgment of the Emergency Director warrant declaration of a Site Area Emergency.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <ol style="list-style-type: none"> <li>Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts, (1) toward site personnel or equipment that could lead to the likely failure of or; (2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.</li> </ol>	<p style="text-align: right;"><b>HS7</b></p> <p><b>Initiating Condition:</b></p> <p>Other conditions exist which in the judgment of the Emergency Director warrant declaration of a Site Area Emergency.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p>Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.</p>	<p> <input checked="" type="checkbox"/> No Change         <input type="checkbox"/> Difference         <input type="checkbox"/> Deviation       </p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HA7</b></p> <p><b>Initiating Condition: ALERT</b></p> <p>Other conditions exist which in the judgment of the Emergency Director warrant declaration of an Alert.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <p>Other conditions exist which, in the judgment of the Emergency Director, indicate that events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.</p>	<p style="text-align: right;"><b>HA7</b></p> <p><b>Initiating Condition:</b></p> <p>Other conditions exist which in the judgment of the Emergency Director warrant declaration of an Alert.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p>Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.</p>	<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p>

NEI 99-01 Rev 6	Proposed EAL	Justification
<p style="text-align: right;"><b>HU7</b></p> <p><b>Initiating Condition: UNUSUAL EVENT</b></p> <p>Other conditions exist which in the judgment of the Emergency Director warrant declaration of a (NO)UE.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <ol style="list-style-type: none"> <li>Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.</li> </ol>	<p style="text-align: right;"><b>HU7</b></p> <p><b>Initiating Condition:</b></p> <p>Other conditions exist which in the judgment of the Emergency director warrant declaration of an Unusual Event.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p>Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.</p>	<p> <input checked="" type="checkbox"/> No Change         <input type="checkbox"/> Difference         <input type="checkbox"/> Deviation       </p>



NEI 99-01 Rev 6	Proposed EAL	Justification
<p><b>Initiating Condition: UNUSUAL EVENT</b> <span style="float: right;"><b>E-HU1</b></span></p> <p>Damage to a loaded cask CONFINEMENT BOUNDARY.</p> <p><b>Operating Mode Applicability:</b></p> <p>All</p> <p><b>Example Emergency Action Levels:</b></p> <ol style="list-style-type: none"> <li>1. Damage to a loaded cask CONFINEMENT BOUNDARY as indicated by an on-contact radiation reading greater than (2 times the site-specific cask specific technical specification allowable radiation level) on the surface of the spent fuel cask.</li> </ol>	<p><b>Initiating Condition:</b> <span style="float: right;"><b>E-HU1</b></span></p> <p>Damage to a loaded cask CONFINEMENT BOUNDARY.</p> <p><b>Operating Mode Applicability:</b></p> <p>1, 2, 3, 4, 5, 6, D</p> <p><b>Emergency Action Levels (EAL):</b></p> <p>Damage to a loaded cask CONFINEMENT BOUNDARY as indicated by an on-contact radiation reading:</p> <ul style="list-style-type: none"> <li>• &gt; <b>1600 mRem/hr</b> on the Horizontal Storage Module (HSM) front surface <b>OR</b></li> <li>• &gt; <b>400 mRem/hr</b> on the Horizontal Storage Module (HSM) door centerline <b>OR</b></li> <li>• &gt; <b>16 mRem/hr</b> on the end shield wall exterior</li> </ul>	<p><input checked="" type="checkbox"/> No Change    <input type="checkbox"/> Difference    <input type="checkbox"/> Deviation</p> <p>1) Listed 2x the site specific cask specific allowable radiation level as per the Certificate of Compliance No. 1014 Amendment No. 10 Attachment A. .</p>