



RS-14-298

10 CFR 50.54(f)

December 19, 2014

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
11555 Rockville Pike,
Rockville, MD 20852

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: Exelon Generation Company, LLC Expedited Seismic Evaluation Process Report (CEUS Sites), Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident

References:

1. NRC Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident, dated March 12, 2012 (ML12053A340)
2. NEI Letter, Proposed Path Forward for NTF Recommendation 2.1: Seismic Re-evaluations, dated April 9, 2013 (ML13101A379)
3. Seismic Evaluation Guidance: "Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1 – Seismic", EPRI, Palo Alto, CA: May 2013. 3002000704 (ML13102A142)
4. NRC Letter, Electric Power Research Institute Report 3002000704, "Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic," as an Acceptable Alternative to the March 12, 2012, Information Request for Seismic Re-evaluations, dated May 7, 2013 (ML13106A331)
5. Exelon Generation Company, LLC, Seismic Hazard and Screening Report (Central and Eastern United States (CEUS) Sites), Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident (RS-14-068), dated March 31, 2014 (ML14091A013)
6. Exelon Generation Company, LLC Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding the Seismic Aspects of Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident – 1.5 Year Response for CEUS Sites (RS-13-205), dated September 12, 2013 (ML13256A070)

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued a 50.54(f) letter to all power reactor licensees and holders of construction permits in active or deferred status. Enclosure 1 of Reference 1 requested each addressee located in the Central and Eastern United States (CEUS) to submit a Seismic Hazard Evaluation and Screening Report within 1.5 years from the date of Reference 1.

In Reference 2, the Nuclear Energy Institute (NEI) requested NRC agreement to delay submittal of the final CEUS Seismic Hazard Evaluation and Screening Reports so that an update to the Electric Power Research Institute (EPRI) ground motion attenuation model could be completed and used to develop that information. NEI proposed that descriptions of subsurface materials and properties and base case velocity profiles be submitted to the NRC by September 12, 2013, (Reference 6), with the remaining seismic hazard and screening information submitted by March 31, 2014 (Reference 5). NRC agreed with that proposed path forward in Reference 4.

Reference 1 requested that licensees provide interim evaluations and actions taken or planned to address the higher seismic hazard relative to the design basis, as appropriate, prior to completion of the risk evaluation. In accordance with the NRC endorsed guidance in Reference 3, the enclosed Expedited Seismic Evaluation Process (ESEP) Report for LaSalle County Station, Units 1 and 2, provides the information described in the "ESEP Report" Section 7, of Reference 3 in accordance with the schedule identified in Reference 2.

All equipment evaluated for the ESEP for LaSalle County Station, Units 1 and 2 was found to have adequate capacity for the required seismic demand as defined by the Augmented Approach (ESEP) guidance (Reference 3). Therefore, no equipment modifications are required.

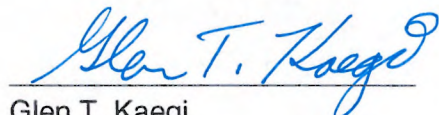
This ESEP report transmittal completes regulatory Commitment No. 3 of Reference 5.

No new regulatory commitments result from this transmittal.

If you have any questions regarding this report, please contact Ron Gaston at (630) 657-3359.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 19th day of December 2014.

Respectfully submitted,



Glen T. Kaegi
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Enclosure:

LaSalle County Station, Units 1 and 2, Expedited Seismic Evaluation Process (ESEP)
Report

cc: Director, Office of Nuclear Reactor Regulation
Regional Administrator - NRC Region III
NRC Senior Resident Inspector – LaSalle County Station
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Illinois Emergency Management Agency - Division of Nuclear Safety

Enclosure

LaSalle County Station, Units 1 and 2

Expedited Seismic Evaluation Process (ESEP) Report

(67 pages)

EXPEDITED SEISMIC EVALUATION PROCESS (ESEP) REPORT

**IN RESPONSE TO THE 50.54(f) INFORMATION REQUEST REGARDING
FUKUSHIMA NEAR-TERM TASK FORCE RECOMMENDATION 2.1: SEISMIC**

for the

**LaSalle County Generating Station Unit 1 and 2
2601 North 21st Road, Marseilles, Illinois, 61341-9757
Facility Operating License No. NPF-11 and NPF-18
NRC Docket No. STN 50-373 and STN 50-374
Correspondence No.: RS-14-298**



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Document Title:
 EXPEDITED SEISMIC EVALUATION PROCESS (ESEP) REPORT IN RESPONSE TO
 THE 50.54(f) INFORMATION REQUEST REGARDING FUKUSHIMA NEAR-TERM TASK
 FORCE RECOMMENDATION 2.1: SEISMIC FOR THE LASALLE COUNTY GENERATING
 STATION

Document Type:

Criteria Interface Report Specification Other Drawing


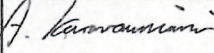
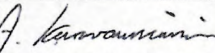

Project Name: Exelon ESEP for LaSalle County Generating Station

Job No.: 14Q4238

Client: 

This document has been prepared in accordance with the S&A Quality Assurance Program Manual, Revision 17 and project requirements:

| | |
|-------------------------|-------|
| Initial Issue (Rev. 0) | |
| Prepared by: See Page 3 | Date: |
| Reviewed by: See Page 3 | Date: |
| Approved by: See Page 3 | Date: |

| Revision Record: | | | | |
|---|---|--|--|---|
| Revision No. | Prepared by/ Date | Reviewed by/ Date | Approved by/ Date | Description of Revision |
| 4 |  H. Young / 12-17-14 |  A. Karavoussianis / 12-17-14 |  A. Karavoussianis / 12-17-14 | Incorporation of minor editorial comments |
|  | | DOCUMENT APPROVAL SHEET | | CONTRACT NO. 14Q4238 |


Document Title:
 EXPEDITED SEISMIC EVALUATION PROCESS (ESEP) REPORT IN RESPONSE TO
 THE 50.54(f) INFORMATION REQUEST REGARDING FUKUSHIMA NEAR-TERM TASK
 FORCE RECOMMENDATION 2.1: SEISMIC FOR THE LASALLE COUNTY GENERATING
 STATION

Document Type:


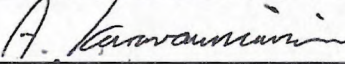
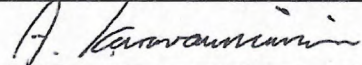
Criteria Interface Report Specification Other Drawing

Project Name: Exelon ESEP for LaSalle County Generating Station

Job No.: 14Q4238

Client: 

This document has been prepared in accordance with the S&A Quality Assurance Program Manual, Revision 17 and project requirements:

| | |
|---|-----------------|
| Initial Issue (Rev. 0) | |
| Prepared by: Hunter Young  | Date: 12/9/2014 |
| Reviewed by: A. Karavoussianis  | Date: 12/9/2014 |
| Approved by: A. Karavoussianis  | Date: 12/9/2014 |

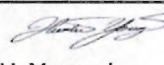
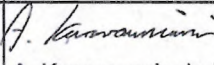
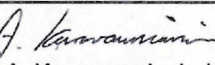
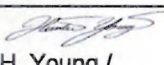
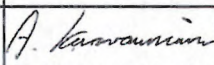
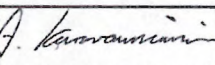
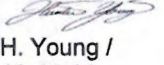
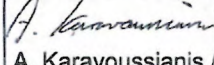
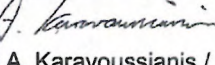

| Revision Record: | | | | |
|---|---|--|--|---|
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| 1 |  H. Young / 12-11-14 |  A. Karavoussianis / 12-11-14 |  A. Karavoussianis / 12-11-14 | Incorporation of minor editorial comments |
| 2 |  H. Young / 12-12-14 |  A. Karavoussianis / 12-12-14 |  A. Karavoussianis / 12-12-14 | Incorporation of minor editorial comments |
| 3 |  H. Young / 12-15-14 |  A. Karavoussianis / 12-15-14 |  A. Karavoussianis / 12-15-14 | Incorporation of minor editorial comments |
|  | | DOCUMENT APPROVAL SHEET | | CONTRACT NO. 14Q4238 |

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1.0 Purpose and Objective

Following the accident at the Fukushima Dai-ichi nuclear power plant resulting from the March 11, 2011, Great Tohoku Earthquake and subsequent tsunami, the Nuclear Regulatory Commission (NRC) established a Near Term Task Force (NTTF) to conduct a systematic review of NRC processes and regulations and to determine if the agency should make additional improvements to its regulatory system. The NTTF developed a set of recommendations intended to clarify and strengthen the regulatory framework for protection against natural phenomena. Subsequently, the NRC issued a 50.54(f) letter on March 12, 2012 [1], requesting information to assure that these recommendations are addressed by all U.S. nuclear power plants. The 50.54(f) letter requests that licensees and holders of construction permits under 10 CFR Part 50 reevaluate the seismic hazards at their sites against present-day NRC requirements and guidance. Depending on the comparison between the reevaluated seismic hazard and the current design basis, further risk assessment may be required. Assessment approaches acceptable to the staff include a seismic probabilistic risk assessment (SPRA), or a seismic margin assessment (SMA). Based upon the assessment results, the NRC staff will determine whether additional regulatory actions are necessary.

This report describes the Expedited Seismic Evaluation Process (ESEP) undertaken for LaSalle County Generating Station (LaSalle County Station). The intent of the ESEP is to perform an interim action in response to the NRC's 50.54(f) letter [1] to demonstrate seismic margin through a review of a subset of the plant equipment that can be relied upon to protect the reactor core following beyond design basis seismic events.

The ESEP is implemented using the methodologies in the NRC endorsed guidance in EPRI 3002000704, Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic [2].

The objective of this report is to provide summary information describing the ESEP evaluations and results for LaSalle County Generating Station. The level of detail provided in this report is intended to enable the NRC to understand the inputs used, the evaluations performed, and the decisions made as a result of the interim evaluations.

2.0 Brief Summary of the FLEX Seismic Implementation Strategies*

The LaSalle County Station FLEX strategies to maintain Core Cooling and to maintain Containment are summarized below. The Spent Fuel Pool Cooling strategies are not described because they are not included within the scope of the ESEP process. The LaSalle FLEX strategy summary is derived from the Overall Integrated Plan (OIP) in Response to the March 12, 2012, Commission Order EA-12-049 [3] including the required 6-Month Updates that have been prepared since the OIP was submitted.

The Phase 1 FLEX strategy relies on installed plant equipment. Reactor Core Cooling is achieved via operation of the Reactor Core Isolation Cooling (RCIC) system with injection from the suppression pool water source to the reactor vessel. Reactor vessel cooldown is achieved via manual operation of the Automatic Depressurization System (ADS) Safety/Relief Valves that discharge to the suppression pool. Key reactor parameters are obtained via DC powered instrumentation. A DC load stripping strategy is employed to extend battery life. Containment Control during Phase 1 is maintained by the normal design features of the containment.

The Phase 2 FLEX strategy relies on installed plant equipment and portable on-site equipment. When RCIC is no longer available, Reactor Core Cooling is provided by a portable diesel-driven FLEX pump that draws a suction from the Ultimate Heat Sink (UHS) and pumps water to the reactor vessel via portable hoses and installed piping systems (Fuel Pool Cooling emergency makeup piping and Residual Heat Removal piping). The water flow path is established via manual operation of system valves. Portable 500Kw 480VAC diesel generators are used to re-power selected 480VAC buses such that installed battery chargers can be operated. An alternate Core Cooling method is available via connection to other divisions of the installed plant piping systems. Alternate electrical power supply is available via connection to receptacles at the battery chargers such that the majority of the installed electrical distribution system is bypassed. Key Reactor Parameters are obtained via DC powered instrumentation.

Containment control in Phase 2 is addressed via venting via the to-be-installed Severe Accident Capable Vent (SACV) system that is required per NRC Order EA-13-109. Makeup to the suppression pool (when inventory is lost via venting) will be provided by a portable diesel-driven FLEX pump that draws a suction from the Ultimate Heat Sink (UHS) and pumps water to the suppression pool via portable hoses and installed piping systems (fuel pool cooling emergency makeup piping and residual heat removal piping).

The Phase 3 FLEX strategy is an extension of the Phase 2 strategies. No new or different portable or installed plant systems are used.

* This section is based upon input received from LaSalle County Station in [21].

Table 2-1: Phase 1 FLEX Strategy

| Safety Function | Primary Method | Alternate Method |
|--|--|---|
| Core Cooling Reactor Core Cooling Key Reactor Parameters | <ul style="list-style-type: none"> • RCIC with suction from the Suppression Pool • RCS cooldown at ≤ 20 Deg F/hr to 150-250 psig via manual control of the ADS SRVs | <ul style="list-style-type: none"> • N/A |
| | <ul style="list-style-type: none"> • RPV Level and Pressure • Use existing Battery Powered Indication • Extend coping with DC Load Stripping | |
| Containment Containment Function Key Containment Parameters | <ul style="list-style-type: none"> • None required maintained by normal design features | <ul style="list-style-type: none"> • N/A |
| | <ul style="list-style-type: none"> • Suppression Pool Water Temperature • Suppression Pool Water Level • Suppression Pool Pressure • Drywell Pressure • Use existing Battery Powered Indication | <ul style="list-style-type: none"> • N/A |

Table 2-2: Phase 2 FLEX Strategy

| Safety Function | Primary Method | Alternate Method |
|--------------------------------------|---|--|
| Core Cooling Reactor Core Cooling | <ul style="list-style-type: none"> • Portable diesel-driven FLEX pump via portable hose and installed plant piping systems (Fuel Pool Cooling Emergency Makeup (FPC EMU) and RHR) • Depressurize RPV via manual control of ADS SRVs | <ul style="list-style-type: none"> • Use portable FLEX pump to inject via other division of installed plant piping systems |
| | Key Reactor Parameters | <ul style="list-style-type: none"> • RPV Level and Pressure • Use existing Battery Powered Indication |
| Containment | Containment Function | <ul style="list-style-type: none"> • Vent via to-be-installed Severe Accident Capable Vent (SACV) • Makeup to the Suppression Pool via the portable FLEX pump and portable hoses and installed plant piping systems. |
| | Key Containment Parameters | <ul style="list-style-type: none"> • Suppression Pool Water Temperature • Suppression Pool Water Level • Suppression Pool Pressure • Drywell Pressure • Use existing Battery Powered Indication |

Table 2-3: Phase 3 FLEX Strategy

| Safety Function | Primary Method | Alternate Method |
|----------------------------|-----------------------|-------------------------|
| Reactor Core Cooling | •Same as Phase 2 | •Same as Phase 2 |
| Key Reactor Parameters | •Same as Phase 2 | •Same as Phase 2 |
| Containment Function | •Same as Phase 2 | •Same as Phase 2 |
| Key Containment Parameters | •Same as Phase 2 | •Same as Phase 2 |

3.0 Equipment Selection Process and ESEL

The selection of equipment for the Expedited Seismic Equipment List (ESEL) [18] followed the guidelines of EPRI 3002000704 [2]. The ESELs for Unit 1 and Unit 2 are presented in Attachments A and B, respectively.

3.1 Equipment Selection Process and ESEL

The selection of equipment to be included on the ESEL was based on installed plant equipment credited in the FLEX strategies during Phase 1, 2 and 3 mitigation of a beyond design basis seismic event, as outlined in the LaSalle County Generating Station Overall Integrated Plan (OIP) in Response to the March 12, 2012, Commission Order EA-12-049 [3] including subsequent 6 month updates through August 2014.

The scope of "installed plant equipment" includes equipment relied upon for the FLEX strategies to sustain the critical functions of Core Cooling and Containment Integrity consistent with the LaSalle County Generating Station OIP [3] including subsequent 6 month updates through August 2014. FLEX recovery actions are excluded from the ESEP scope per EPRI 3002000704 [2]. The overall list of planned FLEX modifications and the scope for consideration herein is limited to those required to support Core Cooling, Reactor Coolant Inventory, Sub-criticality, and Containment Integrity functions. Portable and pre-staged FLEX equipment (not permanently installed/anchored) are excluded from the ESEL per EPRI 3002000704 [2].

The ESEL component selection followed the EPRI guidance outlined in Section 3.2 of EPRI 3002000704 [2].

1. The scope of components is limited to that required to accomplish the core cooling and containment safety functions identified in Table 3-1 of EPRI 3002000704. The instrumentation monitoring requirements for core cooling/containment safety functions are limited to those outlined in the EPRI 3002000704 guidance, and are a subset of those outlined in the LaSalle Generating Station OIP [3] including subsequent 6 month updates through August 2014.
2. The scope of components is limited to installed plant equipment, and FLEX connections necessary to implement the LaSalle County Generating Station OIP [3] including subsequent 6 month updates through August 2014 as described in Section 2.
3. The scope of components assumes the credited FLEX connection modifications are implemented, and are limited to those required to support a single FLEX success path (i.e., either "Primary" or "Back-up/Alternate").
4. The "Primary" FLEX success path is to be specified. Selection of the "Back-up/Alternate" FLEX success path must be justified.

5. Phase 3 coping strategies are included in the ESEP scope, whereas recovery strategies are excluded.
6. Structures, systems, and components excluded per the EPRI 3002000704 [2] guidance are:
 - Structures (e.g. containment, reactor building, control building, auxiliary building, etc.)
 - Piping, cabling, conduit, HVAC, and their supports.
 - Manual valves, check valves and rupture disks.
 - Power-operated valves not required to change state as part of the FLEX mitigation strategies.
 - Nuclear steam supply system components (e.g. reactor pressure vessel and internals, reactor coolant pumps and seals, etc.)

3.1.1 ESEL Development

The ESEL was developed by reviewing the LaSalle County Generating Station OIP [3], including subsequent 6 month updates through August 2014, to determine equipment involved in the FLEX strategies. Further reviews of plant drawings (e.g., Process and Instrumentation Diagrams (P&IDs) and Electrical One Line Diagrams) were performed to identify the boundaries of the flow paths used in the FLEX strategies and to identify specific components in the flow paths needed to support implementation of the FLEX strategies.

Boundaries were established at an electrical power distribution or mechanical isolation device (e.g., circuit breaker, valve, etc.) in branch circuits / branch lines off the defined electrical or fluid flow path. P&IDs were the primary reference documents used to identify mechanical components and instrumentation. The flow paths used for FLEX strategies were selected and specific components were identified using detailed equipment and instrument drawings, piping isometrics, electrical schematics and one-line diagrams, system descriptions, design basis documents, etc., as necessary.

The flow paths credited for the LaSalle County Generating Station ESEP are shown in Table 3-1 below.

Table 3-1: Flow Paths Credited for ESEP

| Flow Path | P&IDs [19] | |
|---|--|--|
| | Unit 1 | Unit 2 |
| Core Heat Removal using RCIC (Reactor Core Isolation Cooling) system: Coolant from the Suppression Pool to the RCS (Reactor Cooling System) via the RCIC pump. Also Main Steam providing motive force to the RCIC pump turbine and exhausted to the Suppression Pool. | M-101 Sh. 1 M-101 Sh. 2 | M-147 Sh. 1 M-147 Sh. 2 |
| RPV (Reactor Pressure Vessel) Pressure Control using ADS (Automatic Depressurization System) system: Main Steam relieved through the ADS Safety/Relief Valves to the Suppression Pool | M-55 Sh. 1 M-66 Sh. 2 M-66 Sh. 7 | M-116 Sh. 1 M-66 Sh. 8 M-66 Sh. 4 M-66 Sh. 7 |
| RPV Make Up: Coolant from the Ultimate Heat Sink via FLEX pump and Fuel Pool Cooling Emergency Makeup (FPC EMU) piping to the RHR (Residual Heat Removal) system, which injects coolant to the RPV. | M-87 Sh. 1 M-96 Sh. 1 M-96 Sh. 2 M-98 Sh. 1 | M-134 Sh. 1 M-142 Sh. 1 M-142 Sh. 2 M-144 Sh. 1 |
| Diesel Fuel Oil Supply: Fuel Oil from the Diesel Fuel Oil Storage Tank, via Diesel Generator Fuel Oil Transfer Pump and the Emergency Diesel Generator Day Tanks to FLEX Truck fuel tanks. | M-85 Sh. 1 | M-132 |

3.1.2 Power Operated Valves

Page 3-3 of EPRI 3002000704 [2] notes that power operated valves not required to change state are excluded from the ESEL. Page 3-2 also notes that “functional failure modes of electrical and mechanical portions of the installed Phase 1 equipment should be considered (e.g. RCIC/AFW trips).” To address this concern, the following guidance is applied in the LaSalle County Generating Station ESEL for functional failure modes associated with power operated valves:

- Power operated valves that must remain energized during the Extended Loss of all AC Power (ELAP) events in order to maintain a credited FLEX flow path or pressure boundary (such as DC powered solenoid-operated valves), were included on the ESEL.
- Power operated valves not required to change state as part of the FLEX mitigation strategies were not included on the ESEL. The seismic event also causes the ELAP event; therefore, the valves are incapable of spurious operation as they would be de-energized.
- Power operated valves not required to change state as part of the FLEX mitigation strategies during Phase 1, and are re-energized and operated during subsequent Phase 2 and 3 strategies, were not evaluated for spurious valve operation as the seismic event that caused the ELAP has passed before the valves are re-powered.

3.1.3 Pull Boxes

Pull boxes were deemed unnecessary to add to the ESELs as these components provide completely passive locations for pulling or installing cables. No breaks or connections in the cabling are included in pull boxes. Pull boxes were considered part of conduit and cabling, which are excluded in accordance with EPRI 3002000704 [2].

3.1.4 Termination Cabinets

Termination cabinets, including cabinets necessary for FLEX Phase 2 and Phase 3 connections, provide consolidated locations for permanently connecting multiple cables. The termination cabinets and the internal connections provide a completely passive function, and the connections are excluded from the ESEL.

3.1.5 Critical Instrumentation Indicators

Critical indicators and recorders are typically physically located on panels/cabinets and are included as separate components; however, seismic evaluation of the instrument indication may be included in the panel/cabinet seismic evaluation (rule-of-the-box).

3.1.6 Phase 2 and Phase 3 Piping Connections

Item 2 in Section 3.1 above notes that the scope of equipment in the ESEL includes "... FLEX connections necessary to implement the LaSalle County Generating Station OIP [3], including subsequent 6 month updates through August 2014, as described in Section 2." Item 3 in Section 3.1 also notes that "The scope of components assumes the credited FLEX connection modifications are implemented, and are limited to those required to support a single FLEX success path (i.e., either "Primary" or "Back-up/Alternate")."

Item 6 in Section 3.1 above goes on to explain that "Piping, cabling, conduit, HVAC, and their supports" are excluded from the ESEL scope in accordance with EPRI 3002000704 [2].

Therefore, piping and pipe supports associated with FLEX Phase 2 and Phase 3 connections are excluded from the scope of the ESEP evaluation. However, any existing, permanently-installed active valves in the FLEX Phase 2 and Phase 3 connection flow path are included in the ESEL.

3.2 Justification for use of Equipment that is not the Primary Means for FLEX Implementation

No equipment that is not the primary means for FLEX implementation is specified on the LaSalle County Generating Station ESEL.

4.0 Ground Motion Response Spectrum (GMRS)

4.1 Plot of GMRS Submitted by the Licensee

In accordance with Section 2.4.2 of the SPID [12], the licensing design basis definition of the SSE control point for LaSalle County Generating Station is used for comparison to the GMRS. Reference 4 lists the LaSalle County Station SSE as being located at 666 feet MSL with a PGA of 0.2g.

The GMRS per the March 31, 2014 submittal report [4] is tabulated in Table 4-1 and shown Figure 4-1 below.

Table 4-1 : LaSalle County Generating Station GMRS (5% Damping)

| Freq. (Hz) | GMRS (unscaled, g) |
|------------|--------------------|
| 0.1 | 0.024 |
| 0.125 | 0.029 |
| 0.15 | 0.035 |
| 0.2 | 0.047 |
| 0.25 | 0.059 |
| 0.3 | 0.071 |
| 0.35 | 0.082 |
| 0.4 | 0.094 |
| 0.5 | 0.118 |
| 0.6 | 0.143 |
| 0.7 | 0.169 |
| 0.8 | 0.193 |
| 0.9 | 0.214 |
| 1 | 0.232 |
| 1.25 | 0.284 |
| 1.5 | 0.330 |
| 2 | 0.403 |
| 2.5 | 0.428 |
| 3 | 0.461 |
| 3.5 | 0.480 |
| 4 | 0.491 |
| 5 | 0.517 |
| 6 | 0.572 |
| 7 | 0.627 |
| 8 | 0.664 |
| 9 | 0.686 |
| 10 | 0.695 |
| 12.5 | 0.635 |
| 15 | 0.574 |
| 20 | 0.507 |
| 25 | 0.486 |
| 30 | 0.454 |
| 35 | 0.426 |
| 40 | 0.404 |
| 50 | 0.373 |
| 60 | 0.354 |
| 70 | 0.341 |
| 80 | 0.331 |
| 90 | 0.324 |
| 100 | 0.317 |

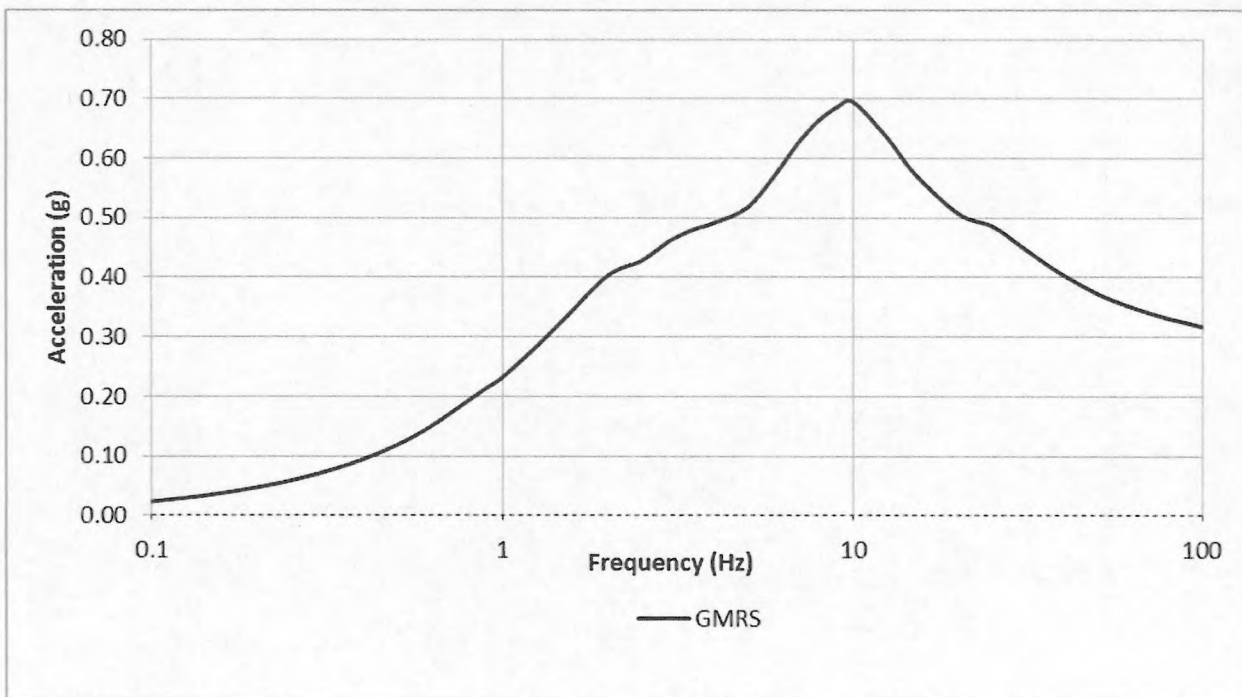


Figure 4-1: LaSalle County Generating Station GMRS (5% Damping)

4.2 Comparison to SSE

As identified in the March submittal report [4], the GMRS exceeds the SSE in the 1-10Hz range. A comparison of the GMRS to the SSE between 1-10Hz is shown in Table 4-2 and Figure 4-2.

Table 4-2 : LaSalle County Generating Station GMRS and SSE (5% Damping) between 1-10Hz

| Freq. (Hz) | GMRS (g) | SSE (g) |
|------------|--------------------|---------|
| 1 | 0.232 | 0.27 |
| 1.25 | 0.284 | 0.34 |
| 1.5 | 0.330 | 0.41 |
| 2 | 0.403 | 0.54 |
| 2.5 | 0.428 | 0.54 |
| 3 | 0.461 | 0.54 |
| 3.5 | 0.480 | 0.54 |
| 4 | 0.491 | 0.54 |
| 5 | 0.517 | 0.54 |
| 6 | 0.572 | 0.54 |
| 6.4 | 0.600 [†] | 0.54 |
| 7 | 0.627 | 0.50 |
| 8 | 0.664 | 0.46 |
| 9 | 0.686 | 0.42 |
| 10 | 0.695 | 0.38 |

[†] Refer to Table 4-1. No control point is defined per [4] for 6.4 Hz in the GMRS; therefore the spectral acceleration is interpolated.

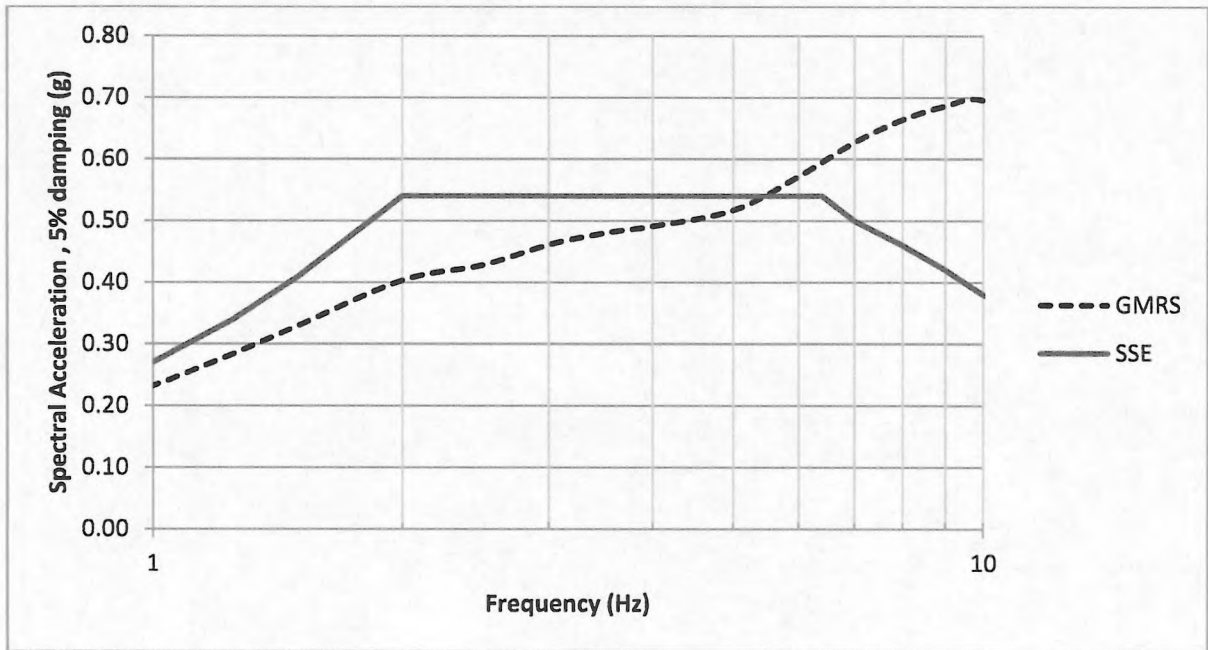


Figure 4-2 : LaSalle County Generating Station GMRS to SSE (5% Damping) Comparison

5.0 Review Level Ground Motion (RLGM)

5.1 Description of RLGM Selected

The RLGM for LaSalle County Generating Station was determined in accordance with Section 4 of EPRI 3002000704 [2] by linearly scaling the LaSalle County Station SSE by the maximum GMRS/SSE ratio between the 1 and 10Hz range. This calculation is shown in Table 5-1.

Table 5-1: LaSalle County Generating Station Maximum GMRS/SSE Ratio (5% Damping)

| Freq. (Hz) | GMRS (g) | SSE, (g) | Ratio GMRS/SSE |
|------------|----------|----------|----------------|
| 1 | 0.232 | 0.27 | 0.86 |
| 1.25 | 0.284 | 0.34 | 0.84 |
| 1.5 | 0.330 | 0.41 | 0.80 |
| 2 | 0.403 | 0.54 | 0.75 |
| 2.5 | 0.428 | 0.54 | 0.79 |
| 3 | 0.461 | 0.54 | 0.85 |
| 3.5 | 0.480 | 0.54 | 0.89 |
| 4 | 0.491 | 0.54 | 0.91 |
| 5 | 0.517 | 0.54 | 0.96 |
| 6 | 0.572 | 0.54 | 1.06 |
| 6.4 | 0.600 | 0.54 | 1.11 |
| 7 | 0.627 | 0.5 | 1.25 |
| 8 | 0.664 | 0.46 | 1.44 |
| 9 | 0.686 | 0.42 | 1.63 |
| 10 | 0.695 | 0.38 | 1.83 |

As shown above, the maximum GMRS/SSE ratio for LaSalle occurs at 10 Hz and equals 1.83.

The resulting 5% damped RLGM, based on scaling the horizontal SSE by the maximum GMRS/SSE ratio of 1.83 is shown in Table 5-2 and Figure 5-1 below. Note that the RLGM PGA is 0.37g.

Table 5-2 : LaSalle Generating Station RLGM (5% Damping)

| Freq. (Hz) | RLGM (g) |
|------------|----------|
| 0.1 | 0.02 |
| 0.13 | 0.02 |
| 0.15 | 0.04 |
| 0.2 | 0.05 |
| 0.25 | 0.09 |
| 0.3 | 0.13 |
| 0.35 | 0.16 |
| 0.38 | 0.18 |
| 0.4 | 0.20 |
| 0.5 | 0.26 |
| 0.6 | 0.29 |
| 0.7 | 0.35 |
| 0.8 | 0.40 |
| 0.9 | 0.44 |
| 1 | 0.49 |
| 1.25 | 0.62 |
| 1.5 | 0.75 |
| 2 | 0.99 |
| 3 | 0.99 |
| 4 | 0.99 |
| 5 | 0.99 |
| 6 | 0.99 |
| 6.4 | 0.99 |
| 7 | 0.92 |
| 8 | 0.84 |
| 9 | 0.77 |
| 10 | 0.70 |
| 12.5 | 0.59 |
| 15 | 0.51 |
| 20 | 0.42 |
| 23.5 | 0.37 |
| 25 | 0.37 |
| 30 | 0.37 |
| 50 | 0.37 |
| 100 | 0.37 |

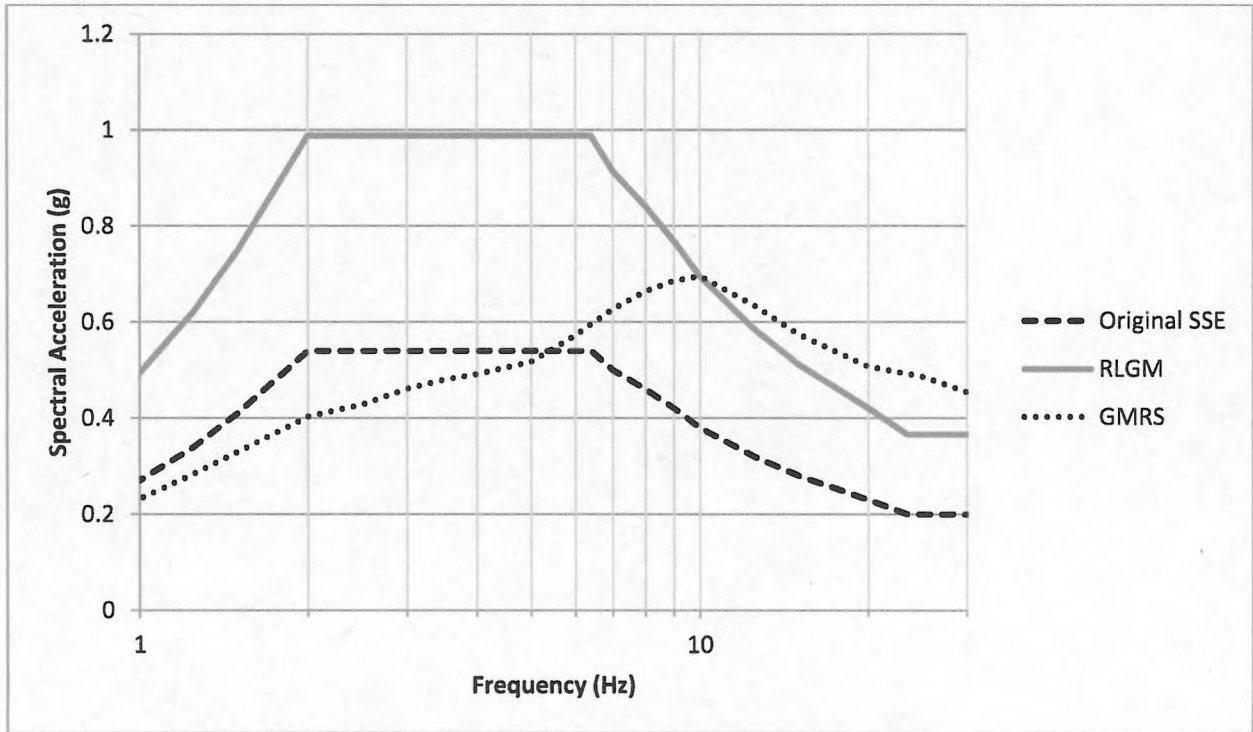


Figure 5-1 : LaSalle County Generating Station RLGM, GMRS & SSE (5% Damping)

5.2 Method to Estimate ISRS

The method used to derive the ESEP in-structure response spectra (ISRS) was to uniformly scale existing SSE-based ISRS from DC-SE-02-LS, Revision 3, "Seismic Response Spectra Design Criteria" [16] by the maximum GMRS/SSE ratio from Table 5-1 of 1.83. The scaled ISRS was determined for all buildings and elevations where ESEL items are located at LaSalle County Generating Station and are documented in 14Q4238-CAL-001 [7].

6.0 Seismic Margin Evaluation Approach

It is necessary to demonstrate that ESEL items have sufficient seismic capacity to meet or exceed the demand characterized by the RLGM. The seismic capacity is characterized as the peak ground acceleration (PGA) for which there is a high confidence of a low probability of failure (HCLPF). The PGA is associated with a specific spectral shape, in this case the 5%-damped RLGM spectral shape. The HCLPF capacity must be equal to or greater than the RLGM PGA. The criteria for seismic capacity determination are given in Section 5 of EPRI 3002000704 [2].

There are two basic approaches for developing HCLPF capacities:

1. Deterministic approach using the Conservative Deterministic Failure Margin (CDFM) methodology of EPRI NP-6041 [5].
2. Probabilistic approach using the fragility analysis methodology of EPRI TR-103959 [6].

For LaSalle County Generating Station, the deterministic approach using the CDFM methodology of EPRI NP-6041 [5] was used to determine HCLPF capacities.

6.1 Summary of Methodologies Used

LaSalle County Generating Station conservatively applied the methodology of EPRI NP-6041 [5] to all items on the ESEL [18]. The screening walkdowns used the screening tables from Chapter 2 of EPRI NP-6041 [5]. The walkdowns were conducted by engineers who, as a minimum, have attended the SQUG Walkdown Screening and Seismic Evaluation Training Course. The walkdowns were documented on Screening Evaluation Work Sheets from EPRI NP-6041 [5]. Anchorage capacity calculations use the CDFM criteria established within EPRI NP-6041 [5] with LaSalle County Station specific allowables and material strengths used as applicable. The input seismic demand used was the RLGM shown in Table 5-2 and Figure 5-1.

6.2 HCLPF Screening Process

From Table 5-2, the spectral peak of the RLGM (amplified PGA) for LaSalle County Generating Station equals 0.99 g. The screening tables in EPRI NP-6041 [5] are based on ground peak spectral accelerations of 0.8g and 1.2g. All LaSalle County Station ESEL components were screened against the caveats of the 0.8g-1.2g column of Table 2-4 of NP-6041. Screening based on this lane with the RLGM spectral shape yields an equivalent HCLPF of 0.45 g PGA (witness $1.2g/0.99g \cdot 0.37g$ PGA = 0.45g PGA).

A number of components were located above 40 feet from grade. For components located 40 feet above grade or more, screening based on ground peak spectral acceleration is not applicable and additional consideration is required. In accordance with Appendix B of EPRI 1019200 [17], components that are above 40 feet from grade and have corresponding ISRS at the base of component

not in exceedance of 1.8g in the component frequency range of interest may be screened using the caveats of the 2nd screening column.

The screening of anchorage for non-valve components was evaluated either by SRT judgment or simple analysis. For non-valve components whose anchorage could not readily be screened by SRT judgment or simple analysis, CDFM HCLPF calculations [7] were performed. This is documented in Attachments C and D.

6.3 Seismic Walkdown Approach

6.3.1 Walkdown Approach

Walkdowns for LaSalle County Generating Station were performed in accordance with the criteria provided in Section 5 of EPRI 3002000704 [2], which refers to EPRI NP-6041 [5] for the Seismic Margin Assessment process. Pages 2-26 through 2-30 of EPRI NP-6041 [5] describe the seismic walkdown criteria, including the following key criteria:

"The SRT [Seismic Review Team] should "walk by" 100% of all components which are reasonably accessible and in non-radioactive or low radioactive environments. Seismic capability assessment of components which are inaccessible, in high-radioactive environments, or possibly within contaminated containment, will have to rely more on alternate means such as photographic inspection, more reliance on seismic reanalysis, and possibly, smaller inspection teams and more hurried inspections. A 100% "walk by" does not mean complete inspection of each component, nor does it mean requiring an electrician or other technician to de-energize and open cabinets or panels for detailed inspection of all components. This walkdown is not intended to be a QA or QC review or a review of the adequacy of the component at the SSE level.

If the SRT has a reasonable basis for assuming that the group of components are similar and are similarly anchored, then it is only necessary to inspect one component out of this group. The "similarity-basis" should be developed before the walkdown during the seismic capability preparatory work (Step 3) by reference to drawings, calculations or specifications. The one component or each type which is selected should be thoroughly inspected which probably does mean de-energizing and opening cabinets or panels for this very limited sample. Generally, a spare representative component can be found so as to enable the inspection to be performed while the plant is in operation. At least for the one component of each type which is selected, anchorage should be thoroughly inspected.

The walkdown procedure should be performed in an ad hoc manner. For each class of components the SRT should look closely at the first items and compare the field configurations with the construction drawings and/or specifications. If a one-to-one correspondence is found, then subsequent items do not have to be inspected in as great a detail. Ultimately the walkdown becomes a "walk by" of the component class as the SRT becomes confident that the

construction pattern is typical. This procedure for inspection should be repeated for each component class; although, during the actual walkdown the SRT may be inspecting several classes of components in parallel. If serious exceptions to the drawings or questionable construction practices are found then the system or component class must be inspected in closer detail until the systematic deficiency is defined.

The 100% "walk by" is to look for outliers, lack of similarity, anchorage which is different from that shown on drawings or prescribed in criteria for that component, potential SI [Seismic Interaction][‡] problems, situations that are at odds with the team members' past experience, and any other areas of serious seismic concern. If any such concerns surface, then the limited sample size of one component of each type for thorough inspection will have to be increased. The increase in sample size which should be inspected will depend upon the number of outliers and different anchorages, etc., which are observed. It is up to the SRT to ultimately select the sample size since they are the ones who are responsible for the seismic adequacy of all elements which they screen from the margin review. Appendix D gives guidance for sampling selection."

The LaSalle County Generating Station walkdowns included, as a minimum, a 100% walk-by of all items on the ESEL except as noted in Section 7.0. Any previous walkdown information that was relied upon as the basis for SRT judgment is documented in Section 6.3.2.

[‡] EPRI 3002000704 [2] page 5-4 limits the ESEP seismic interaction reviews to "nearby block walls" and "piping attached to tanks" which are reviewed "to address the possibility of failures due to differential displacements." Other potential seismic interaction evaluations are "deferred to the full seismic risk evaluations performed in accordance with EPRI 1025287 [12]."

6.3.2 Application of Previous Walkdown Information

Previous seismic walkdowns conducted for the NTTF 2.3 [14] program[§] were used to supplement the NTTF 2.1 walkdowns of LaSalle County Station.

In general, detailed inspections were performed for NTTF 2.1 and included, as a minimum, a walk-by of all the components on the ESEL by the SRT with exception to the items listed below. A detailed discussion and resolution for each of the items listed below is provided in Section 7.0. This walkdown/walk-by was also used to confirm that no new SI[¶] existed.

- U1 Safety Relief Valves (SRV):
 - 1B21-F013C
 - 1B21-F013D
 - 1B21-F013E
 - 1B21-F013R
 - 1B21-F013S
 - 1B21-F013U
 - 1B21-F013V
- U1 SRV Accumulators:
 - 1B21-A003C
 - 1B21-A003D
 - 1B21-A003E
 - 1B21-A003R
 - 1B21-A003S
 - 1B21-A003U
 - 1B21-A003V
- RCIC Suppression Pool Suction Valve, 2E51-F031

[§] Photos taken during the NTTF Recommendation 2.3 seismic walkdowns [14], although available to the SRT during the ESEP walkdowns, were not necessary to the SRT at LaSalle County Station.

[¶] EPRI 3002000704 [2] page 5-4 limits the ESEP seismic interaction reviews to "nearby block walls" and "piping attached to tanks" which are reviewed "to address the possibility of failures due to differential displacements." Other potential seismic interaction evaluations are "deferred to the full seismic risk evaluations performed in accordance with EPRI 1025287 [12]."

6.3.3 Significant Walkdown Observations

Consistent with the guidance from NP-6041 [5], no significant outliers or anchorage concerns were identified during the LaSalle County Generating Station seismic walkdowns. The following observation was noted during the walkdowns:

- Block walls and columns were identified in the proximity of ESEL equipment. These block walls and columns were assessed for their structural adequacy to withstand the seismic loads resulting from the RLG. For any cases where the block wall represented the HCLPF failure mode for an ESEL item, it is noted on the ESEL HCLPF tables in Attachments C and D.

6.4 HCLPF Calculation Process

ESEL items were evaluated using the criteria in EPRI NP-6041 [5]. Those evaluations included the following steps:

- Performing seismic capability walkdowns for equipment to evaluate the equipment installed plant conditions
- Performing screening evaluations using the screening tables in EPRI NP-6041 [5] as described in Section 6.2
- Performing HCLPF calculations considering various failure modes that include both structural (e.g. anchorage, load path etc.) and functional failure modes.

All HCLPF calculations were performed using the CDFM methodology and are documented in LaSalle County Generating Station calculations [7].

Anchorage configurations for non-valve components were evaluated either by SRT judgment, large margins in existing design basis calculations, or CDFM based HCLPF calculations [7]. The results of these analysis methods are documented in Attachment C and Attachment D. For components beyond 40 feet above grade, Table 2-4 of NP-6041 [5] is not directly applicable.

EPRI 3002000704 [2] Section 5 references EPRI 1019200 [17] with respect to screening criteria beyond 40 feet above grade. This guide update allows multiplying the screening lane spectral acceleration value ranges by a factor of 1.5 in order to account for spectral accelerations at the base of the component^{††}. This screening level at the base of a component is compared to the ISRS demand corresponding to the RLG. For example, by factoring the acceleration ranges for screening lane 2 of NP-6041-SL Table 2-4, the capacity at the base of a component is bounded by $1.2g \times 1.5 = 1.8g$. This is compared with the seismic demand presented by the ISRS (as opposed to the RLG).

^{††} Page A-22 of NP-6041 [5] also references the use of 1.5 times the bounding spectra for comparison against the floor spectra.

As described in Section 6.0, for HCLPF calculations the Conservative, Deterministic Failure Margin (CDFM) analysis criteria established in Section 6 of EPRI NP-6041 [5] are used for a detailed analysis of components. The relevant CDFM criteria from EPRI NP-6041 [5] are summarized in Table 6-1.

Table 6-1: HCLPF Calculation Summary

| | |
|---|--|
| Load combination: | Normal + Seismic Margin Earthquake (SME) ^{‡‡} |
| Ground response spectrum: | Conservatively specified (84% non-exceedance probability) |
| Damping: | Conservative estimate of median damping. |
| Structural model: | Best estimate (median) + uncertainty variation in frequency. |
| Soil-structure interaction | Best estimate (median) + parameter variation |
| Material strength: | Code specified minimum strength or 95% exceedance of actual strength if test data is available. |
| Static capacity equations: | Code ultimate strength (ACI), maximum strength (AISC), Service Level D (ASME) or functional limits. If test data is available to demonstrate excessive conservatism of code equations then use 84% exceedance of test data for capacity equations. |
| Inelastic energy absorption: | For non-brittle failure modes and linear analysis, use 80% of computed seismic stress in capacity evaluation to account for ductility benefits or perform nonlinear analysis and use 95% exceedance ductility levels. |
| In-structure (floor) spectra generation: | Use frequency shifting rather than peak broadening to account for uncertainty and use median damping. |

The HCLPF capacity is equal to the PGA at which the strength limit is reached. The HCLPF earthquake load is calculated as follows:

$$U = \text{Normal} + E_c$$

Where:

- U = Ultimate strength per Section 6 of EPRI NP-6041 [5]
- E_c = HCLPF earthquake load
- Normal = Normal operating loads (dead and live load expected to be present, etc.)

For this calculation, the HCLPF earthquake load is related to a fixed reference earthquake:

$$E_c = S_{F_c} * E_{ref}$$

Where:

- E_{ref} = reference earthquake from the relevant in-structure response spectrum (ISRS)
- S_{F_c} = component-specific scale factor that satisfies U = Normal + E_c

The HCLPF will be defined as the PGA produced by E_c. Because the LaSalle RLGM PGA is 0.37g:
 HCLPF = 0.37g * S_{F_c}

^{‡‡} The SME pertaining to HCLPF calculations for LaSalle County Generating Station is equivalent to the RLGM.

6.5 Functional Evaluation of Relays

The LaSalle Unit 1 ESEL and Unit 2 ESEL [18] each had fifteen relays and eleven switches associated with the FLEX Phase 1 response, which required functional evaluations. Each relay was evaluated using the SMA relay evaluation criteria in Section 3 of NP-6041 [5].

HCLPF capacities for the relays and switches are calculated using established GERS capacities from the NP-7147 SQUG Advisory [19] and NP-5223 [20], respectively. Where GERS capacities were not available, specific seismic qualification test-based capacities were used. In-cabinet capacity to demand evaluations were performed using the aforementioned seismic capacities and the ESEP ISRS scaled with the NP-6041 in-cabinet amplification factors. In each case, the capacity exceeded the demand. These results are included in Attachments C and D. The ESEP relay functional evaluations are documented in S&A calculation 14Q4238-CAL-005 [7].

6.6 Tabulated ESEL HCLPF Values (Including Key Failure Modes)

Tabulated ESEL HCLPF values including the key failure modes are included in Attachment C for Unit 1 and in Attachment D for Unit 2 items.

- For items screened out using NP-6041 [5] screening tables, the HCLPF is listed as "> RLGM" and the failure mode is listed as "Screened."
- For items where anchorage controls the HCLPF value, the anchorage HCLPF value is listed in the table and the failure mode is listed as "Anchorage."
- For items where block wall interaction controls the HCLPF value, the associated block wall HCLPF value is listed in the table and the failure mode is listed as "Block Wall Interaction." In cases where finite element analysis was used, the HCLPF is listed as "> RLGM."
- For items where a relay or switch HCLPF controls, the relay or switch HCLPF value is listed in the table and the failure mode is listed as "Functional Failure."
- For items where an equipment capacity based upon the screening lane values of Table 2-4 of EPRI NP-6041 [5] controls the HCLPF value (e.g. anchorage, block wall, or relay HCLPF capacity exceeds the equipment capacity derived from screening lanes), the screening lane HCLPF value is listed in the table and the failure mode is listed as "Equipment Capacity." Based on NP-6041 Table 2-4 lane 2, this limit is equal to 0.45g for items below 40 feet above grade and 0.37g for items located greater than 40 feet above grade.

The "Equipment Capacity" limits from above are calculated as follows:

The upper-bound spectral peak to NP-6041 Table 2-4 lane 2 is 1.2g. From Table 5-2, the RLGM spectral peak is 0.99g and the PGA is 0.37g. Thus, for equipment less than 40 feet above grade, the "Equipment Capacity" HCLPF is limited to $1.2g / 0.99g * 0.37g \text{ PGA} = 0.45g \text{ PGA}$. For equipment located greater than 40 feet above grade, if the associated ISRS spectral accelerations in the component frequency range of interest do not exceed 1.5 times the NP-6041 Table 2-4 lane 2 bounding

spectrum (e.g. 1.8g peak spectral acceleration), the "Equipment Capacity" HCLPF is conservatively limited to the RLGM PGA of 0.37g.

7.0 Inaccessible Items

7.1 Identification of ESEL Items Inaccessible for Walkdowns

Fifteen ESEL items were not accessible to the SRT during the ESEP walkdowns at LaSalle County Station. A description of circumstances and disposition for these items is provided below.

U1 SRVs and their accumulators (see Section 6.3.2 for component IDs):

The U1 SRVs were not walked down by the SRT due to Radiation Protection concerns given that the components are located within the Drywell and Unit 1 was not in outage during the available SRT walkdown window. In anticipation of not having at-power Drywell access, LaSalle County Station engineers entered the drywell during the U1 outage in February of 2014 and took photographs of the components to the satisfaction of the SRT. The photographs were reviewed by the SRT and determined to be acceptable for evaluation of the U1 SRVs and their accumulators (including the consideration of potential seismic interaction), with no further walkdowns, in accordance with the methodology of NP-6041.

2E51-F031:

This valve was not walked down by the SRT due to the component being located in a contaminated and high radiation area. Existing photos from Radiation Protection were reviewed by the SRT and determined to be acceptable for evaluation of 2E51-F031 (including the consideration of potential seismic interaction), with no further walkdowns, in accordance with the methodology of NP-6041.

7.2 Planned Walkdown / Evaluation Schedule / Close Out

No additional walkdowns are required.

8.0 ESEP Conclusions and Results

8.1 Supporting Information

LaSalle County Generating Station has performed the ESEP as an interim action in response to the NRC's 50.54(f) letter [1]. It was performed using the methodologies in the NRC endorsed guidance in EPRI 3002000704 [2].

The ESEP provides an important demonstration of seismic margin and expedites plant safety enhancements through evaluations and potential near-term modifications of plant equipment that can be relied upon to protect the reactor core following beyond design basis seismic events.

The ESEP is part of the overall LaSalle County Generating Station response to the NRC's 50.54(f) letter [1]. On March 12, 2014, NEI submitted to the NRC results of a study [9] of seismic core damage risk estimates based on updated seismic hazard information as it applies to operating nuclear reactors in the Central and Eastern United States (CEUS). The study concluded that "site-specific seismic hazards show that there [...] has not been an overall increase in seismic risk for the fleet of U.S. plants" based on the re-evaluated seismic hazards. As such, the "current seismic design of operating reactors continues to provide a safety margin to withstand potential earthquakes exceeding the seismic design basis."

The NRC's May 9, 2014 NTTF 2.1 Screening and Prioritization letter [11] concluded that the "fleetwide seismic risk estimates are consistent with the approach and results used in the GI-199 safety/risk assessment." The letter also stated that "As a result, the staff has confirmed that the conclusions reached in GI-199 safety/risk assessment remain valid and that the plants can continue to operate while additional evaluations are conducted."

An assessment of the change in seismic risk for LaSalle was included in the fleet risk evaluation submitted in the March 12, 2014 NEI letter [9] therefore, the conclusions in the NRC's May 9 letter [11] also apply to LaSalle County Generating Station.

In addition, the March 12, 2014 NEI letter [9] provided an attached "Perspectives on the Seismic Capacity of Operating Plants," which (1) assessed a number of qualitative reasons why the design of Structures, Systems, and Components (SSCs) inherently contain margin beyond their design level, (2) discussed industrial seismic experience databases of performance of industry facility components similar to nuclear SSCs, and (3) discussed earthquake experience at operating plants.

The fleet of currently operating nuclear power plants was designed using conservative practices, such that the plants have significant margin to withstand large ground motions safely. This has been borne out of those plants that have actually experienced significant earthquakes. The seismic design process has inherent (and intentional) conservatisms which result in significant seismic margins within SSCs. These conservatisms are reflected in several key aspects of the seismic design process, including:

- Safety factors applied in design calculations
- Damping values used in the dynamic analysis of SSCs
- Bounding synthetic time histories for in-structure response spectra calculations
- Broadening criteria for in-structure response spectra
- Response spectra enveloping criteria typically used in SSC analysis and testing applications
- Response spectra based frequency domain analysis rather than explicit time history based time domain analysis
- Bounding requirements in codes and standards
- Use of minimum strength requirements of structural components (concrete and steel)
- Bounding testing requirements, and
- Ductile behavior of the primary materials (that is, not crediting the additional capacity of materials such as steel and reinforced concrete beyond the essentially elastic range, etc.).

These design practices combine to result in margins such that the SSCs will continue to fulfill their functions at ground motions well above the SSE.

8.2 Summary of ESEP Identified and Planned Modifications

The results of the LaSalle County Generating Station ESEP performed as an interim action in response to the NRC's 50.54(f) letter [1] using the methodologies in the NRC endorsed guidance in EPRI 3002000704 [2] show that all equipment evaluated are adequate in resisting the seismic loads expected to result from the site RLG. Therefore, no plant modifications are required as a result of the LaSalle County Generating Station ESEP.

8.3 Modification Implementation Schedule

No modification implementation schedule is required because no modifications are required.

8.4 Summary of Regulatory Commitments

No regulatory commitments are required.

9.0 References

- 1 NRC (E Leeds and M Johnson) Letter to All Power Reactor Licensees et al., "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3 and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident," March 12, 2012
- 2 Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1 – Seismic. EPRI, Palo Alto, CA: May 2013. 3002000704.
- 3 Order Number EA-12-049 responses:
 - 3.1 Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design Basis External Events (Order Number EA-12-049) dated February 28, 2013, Correspondence No. RS-13-021
 - 3.2 First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design-Basis External Events (Order Number EA-12-049) dated August 28, 2013, Correspondence No. RS-13-121
 - 3.3 Second Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design-Basis External Events (Order Number EA-12-049) dated February 28, 2014, Correspondence No. RS-14-011
 - 3.4 Third Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design-Basis External Events (Order Number EA-12-049) dated August 28, 2014, Correspondence No. RS-14-209
- 4 Seismic Hazard and Screening Report in Response to the 50.54(f) Information Request Regarding Fukushima Near-Term Task Force Recommendation 2.1: Seismic for LaSalle County Generating Station Units 1 and 2 dated 3/25/14, Correspondence No. RS-14-068 (S&L Report SL-012194, Revision 1)
- 5 A Methodology for Assessment of Nuclear Power Plant Seismic Margin, Rev. 1, August 1991, Electric Power Research Institute, Palo Alto, CA. EPRI NP-6041
- 6 Methodology for Developing Seismic Fragilities, August 1991, EPRI, Palo Alto, CA. 1994, TR-103959
- 7 LaSalle County Generating Station HCLPF Calculations for the ESEP project
 - a. 14Q4238-CAL-001 "Generation of In-Structure Response Spectra for Use in ESEP Evaluations" Rev. 1
 - b. 14Q4238-CAL-002 "Seismic Capacity of Components for ESEP" Rev. 0
 - c. 14Q4238-CAL-003 "Seismic Capacity of Masonry Structures for ESEP" Rev. 1
 - d. 14Q4238-CAL-004 "HCLPF Seismic Capacity of Miscellaneous ESEP Components". Rev. 1
 - e. 14Q4238-CAL-005 "ESEP HCLPFs for Relays" Rev. 1
 - f. 14Q4238-CAL-006 "Finite Element Analysis of Select Masonry Walls" Rev. 2
- 8 Nuclear Regulatory Commission, NUREG/CR-0098, Development of Criteria for Seismic Review of Selected Nuclear Power Plants, published May 1978
- 9 Nuclear Energy Institute (NEI), A. Pietrangelo, Letter to E. Leeds of the USNRC, "Seismic Risk Evaluations for Plants in the Central and Eastern United States", March 12, 2014
- 10 Nuclear Energy Institute (NEI), A. Pietrangelo, Letter to D. Skeen of the USNRC, "Proposed Path Forward for NTTF Recommendation 2.1: Seismic Reevaluations", April 9, 2013

- 11 NRC (E Leeds) Letter to All Power Reactor Licensees et al., "Screening and Prioritization Results Regarding Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(F) Regarding Seismic Hazard Re-Evaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights From the Fukushima Dai-Ichi Accident," May 9, 2014
- 12 Seismic Evaluation Guidance: Screening, Prioritization and Implementation Details (SPID) for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic. EPRI, Palo Alto, CA: February 2013. 1025287
- 13 NRC (E Leeds) Letter to NEI (J Pollock), Electric Power Research Institute Final Draft Report, "Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic," as an Acceptable Alternative to the March 12, 2012, Information Request for Seismic Reevaluations," May 7, 2013
- 14 Seismic walkdown reports in response to the 50.54(f) information request regarding Fukushima Near-Term Task Force Recommendation 2.3:
 - 14.1 Correspondence RS-12-163, Report 12Q0108.50-R-001, Revision 1, Unit 1
 - 14.2 Correspondence RS-12-163, Report 12Q0108.50-R-002, Revision 1, Unit 2
- 15 LaSalle County Power Station Updated Final Safety Analysis Report (UFSAR), Revision 20
- 16 LaSalle Calculation DC-SE-02-LS, Rev. 03 "Seismic Response Spectra Design Criteria"
- 17 EPRI Technical Report (TR) 1019200, "Seismic Fragility Applications Guide Update," December 2009
- 18 S&A Report No.: 14Q4238-RPT-003 Rev 4, Validation of Expedited Seismic Equipment List
- 19 LaSalle County Generating Station Drawings
 - a. LAS Drawing M-142 Sheet 1, Rev. AY, *P&ID Residual Heat Removal System (R.H.R.S.)*
 - b. LAS Drawing M-55 Sheet 1, Rev. Y, *P&ID Main Steam*
 - c. LAS Drawing M-66 Sheet 2, Rev. V, *P&ID Drywell Pneumatic System*
 - d. LAS Drawing M-66 Sheet 4, Rev. AB, *P&ID Drywell Pneumatic System*
 - e. LAS Drawing M-66 Sheet 8, Rev. H, *P&ID Drywell Pneumatic System*
 - f. LAS Drawing M-66 Sheet 7, Rev. U, *P&ID Drywell Pneumatic System*
 - g. LAS Drawing M-116 Sheet 1, Rev. N, *P&ID Main Steam*
 - h. LAS Drawing M-142 Sheet 2, Rev. AX, *P&ID Residual Heat Removal System (R.H.R.S.)*
 - i. LAS Drawing M-87 Sheet 1, Rev. BG, *P&ID Core Standby Cooling System Equipment Cooling Water System*
 - j. LAS Drawing M-96 Sheet 2, Rev. AZ, *P&ID Residual Heat Removal System (R.H.R.S.)*
 - k. LAS Drawing M-96 Sheet 1, Rev. AZ, *P&ID Residual Heat Removal System (R.H.R.S.)*
 - l. LAS Drawing M-101 Sheet 1, Rev. BH, *P&ID Reactor Core Isolation Coolant (R.C.I.C.)*
 - m. LAS Drawing M-101 Sheet 2, Rev. AR, *P&ID Reactor Core Isolation Coolant System (R.C.I.C.)*
 - n. LAS Drawing M-85 Sheet 1, Rev. AE, *P&ID Diesel Oil System*
 - o. LAS Drawing M-132, Rev. AC, *P & ID Diesel Oil System*
 - p. LAS Drawing M-98 Sheet 1, Rev AO, *P&ID Fuel Pool Cooling Filter & Demineralizing System*
 - q. LAS Drawing M-134 Sheet 1, Rev AU, *P&ID CSCS Equipment Cooling Water System*
 - r. LAS Drawing M-144 Sheet 1, Rev AL, *P&ID Fuel Pool Cooling Filter & Demineralizing System*
 - s. LAS Drawing M-147 Sheet 1, Rev BL, *P&ID Reactor Core Isolation Coolant System (R.C.I.C.)*
 - t. LAS Drawing M-147 Sheet 2, Rev AO, *P&ID Reactor Core Isolation Coolant System (R.C.I.C.)*
- 19 SQUG Advisory Memo No.: 2004-02, Relay GERS Corrections, September 2004

- 20 EPRI Report No.: NP-5223-SL Rev 1, Generic Ruggedness of Power Plant Equipment
- 21 S&A Letter Received from Client LRC-006, "ESEL Validation Report and Input to FLEX Plan."
October 27, 2014

Attachment A – LaSalle County Generating Station Unit 1 ESEL

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|--|------------------------|-------------------------|-------------------|
| 53 | 135X | 480VAC Sw. Gr. (1AP19E) (Div. 1) | In Service | In Service | |
| 4 | 135X-3 | 480VAC MCC (1AP73E)(Div. 1) | In Service | In Service | |
| 54 | 136X | 480VAC Sw. Gr. (1AP21E) (Div. 2) | In Service | In Service | |
| 13 | 136X-3 | 480VAC MCC (1AP81E)(Div. 2) | In Service | In Service | |
| 55 | 136Y | 480VAC Sw. Gr. (1AP22E) (Div. 2) | In Service | In Service | |
| 218 | 136Y-1 | 480V MCC (1AP82E) | In Service | In Service | |
| 98 | 1B21-A003C | "C" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 101 | 1B21-A003D | "D" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 104 | 1B21-A003E | "E" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 107 | 1B21-A003R | "R" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 110 | 1B21-A003S | "S" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 113 | 1B21-A003U | "U" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 116 | 1B21-A003V | "V" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 99 | 1B21C-S008A | "C" ADS SRV Hand switch @ Panel 1H13-P628 | In Service | In Service | |
| 102 | 1B21C-S009A | "D" ADS SRV Hand switch @ Panel 1H13-P628 | In Service | In Service | |
| 105 | 1B21C-S010A | "E" ADS SRV Hand switch @ Panel 1H13-P628 | In Service | In Service | |
| 108 | 1B21C-S011A | "R" ADS SRV Hand switch @ Panel 1H13-P628 | In Service | In Service | |
| 111 | 1B21C-S012A | "S" ADS SRV Hand switch @ Panel 1H13-P628 | In Service | In Service | |
| 114 | 1B21C-S013A | "U" ADS SRV Hand switch @ Panel 1H13-P628 | In Service | In Service | |
| 117 | 1B21C-S014A | "V" ADS SRV Hand switch @ Panel 1H13-P628 | In Service | In Service | |
| 97 | 1B21-F013C | "C" ADS SRV | In Service | In Service | |
| 100 | 1B21-F013D | "D" ADS SRV | In Service | In Service | |
| 103 | 1B21-F013E | "E" ADS SRV | In Service | In Service | |
| 106 | 1B21-F013R | "R" ADS SRV | In Service | In Service | |
| 109 | 1B21-F013S | "S" ADS SRV | In Service | In Service | |
| 112 | 1B21-F013U | "U" ADS SRV | In Service | In Service | |
| 115 | 1B21-F013V | "V" ADS SRV | In Service | In Service | |
| 70 | 1B21-N026DA | RPV Level Transmitter (feeds 1C61-R010) | In Service | In Service | |
| 68 | 1C61-N006 | RPV Pressure Transmitter (feeds 1C61-R011) | In Service | In Service | |
| 219 | 1C61-P001 | Panel | In Service | In Service | |
| 69 | 1C61-R010 | RPV Level (WR) Indicator @ Panel 1C61-P001 | Standby | In Service | |
| 67 | 1C61-R011 | RPV Pressure Indicator @ Panel 1C61-P001 | Standby | In Service | |
| 19 | 1DC01E | 250V Battery (Div. 1) | In Service | In Service | |
| 20 | 1DC02E | 250VDC Bus #1 | In Service | In Service | |
| 22 | 1DC03E | 250VDC Battery Charger #1 | In Service | In Service | |

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|---|------------------------|-------------------------|---|
| 21 | 1DC06E | 250VDC MCC 121Y | In Service | In Service | |
| 1 | 1DC07E | 125V Battery 1A (Div. 1) | In Service | In Service | |
| 2 | 1DC08E | 125VDC Bus 1A (Div. 1) | In Service | In Service | |
| 5 | 1DC09E | 125VDC Battery Main Charger 1AA | In Service | In Service | |
| 3 | 1DC11E | 125VDC Dist. Panel 111Y (Div. 1) | In Service | In Service | |
| 12 | 1DC13E | 125VDC Dist. Panel 112Y (Div. 2) | In Service | In Service | |
| 10 | 1DC14E | 125V Battery 1B (Div. 2) | In Service | In Service | |
| 11 | 1DC15E | 125VDC Bus 1B (Div. 2) | In Service | In Service | |
| 14 | 1DC17E | 125VDC Battery Main Charger 1BA | In Service | In Service | |
| 220 | 1DG03J | Diesel Panel | In Service | In Service | |
| 61 | 1DO01P | Diesel Generator Fuel Transfer Pump (Div. 2) | In Service | In Service | |
| 59 | 1DO01T | Diesel Fuel Storage Tank (Div. 2) | In Service | In Service | Passive Component |
| 60 | 1DO05T | Diesel Generator Day Tank (Div. 2) | In Service | In Service | Passive Component |
| 221 | 1E12-B001B | B RHR HEAT EXCHANGER | Available | Available | Passive Component |
| 209 | 1E12-F016B | B' RHR Outboard Primary Containment Spray Isolation Valve | In Service | In Service | Manually open as needed |
| 198 | 1E12-F027B | "B" RHR Suppression Chamber Spray Valve | In Service - Closed | In Service - Open | Manually open as needed |
| 197 | 1E12-F042B | "B" RHR (LPCI) RPV Injection Valve | In Service - Closed | In Service - Open | Manually open as needed |
| 222 | 1E31-N022A | Pressure Switch in Cabinet 1H22-P017 | Open Contact | Open Contact | |
| 223 | 1E31-N022B | Pressure Switch in Cabinet 1H22-P029 | Open Contact | Open Contact | |
| 224 | 1E31-N022C | Pressure Switch in Cabinet 1H22-P017 | Open Contact | Open Contact | |
| 225 | 1E31-N022D | Pressure Switch in Cabinet 1H22-P029 | Open Contact | Open Contact | |
| 226 | 1E51A-K015 | Relay in Cabinet 1H13-P621 | De-Energized | De-Energized | |
| 227 | 1E51A-K029 | Relay in Cabinet 1H13-P621 | De-Energized | De-Energized | |
| 228 | 1E51A-K032 | Relay in Cabinet 1H13-P618 | De-Energized | De-Energized | 4 second time delay pick-up relay controlled by 1E31-N007BA. Time delay prevents chatter on 1E31-N007BA from affecting control circuit. |
| 229 | 1E51A-K033 | Relay in Cabinet 1H13-P618 | De-Energized | De-Energized | |
| 230 | 1E51A-K039 | Relay in Cabinet 1H13-P618 | De-Energized | De-Energized | |
| 231 | 1E51A-K047 | Relay in Cabinet 1H13-P621 | De-Energized | De-Energized | 4 second time delay pick-up relay controlled by 1E31-N013AA. Time delay prevents chatter on 1E31-N013AA from affecting control circuit. |

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|--|------------------------|-------------------------|---|
| 232 | 1E51A-K048 | Relay in Cabinet 1H13-P618 | De-Energized | De-Energized | 4 second time delay pick-up relay controlled by 1E31-N013BA. Time delay prevents chatter on 1E31-N013BA from affecting control circuit. |
| 233 | 1E51A-K054 | Relay in Cabinet 1H13-P621 | De-Energized | De-Energized | |
| 234 | 1E51A-K055 | Relay in Cabinet 1H13-P621 | De-Energized | De-Energized | |
| 235 | 1E51A-K057 | Relay in Cabinet 1H13-P618 | De-Energized | De-Energized | |
| 236 | 1E51A-K058 | Relay in Cabinet 1H13-P618 | De-Energized | De-Energized | |
| 237 | 1E51A-K006 | Relay in Cabinet 1H13-P621 | De-Energized | De-Energized | |
| 238 | 1E51A-K060 | Relay in Cabinet 1H13-P618 | De-Energized | De-Energized | |
| 239 | 1E51A-K007 | Relay in Cabinet 1H13-P621 | De-Energized | De-Energized | |
| 240 | 1E51A-K008 | Relay in Cabinet 1H13-P621 | De-Energized | De-Energized | |
| 152 | 1E51A-S003 | RCIC Steam Inlet MOV Hand switch @ Panel 1H13-P601 | In Service | In Service | |
| 170 | 1E51A-S004 | RCIC CST Suction Valve Hand switch @ Panel 1H13-P601 | In Service | In Service | |
| 161 | 1E51A-S005 | RCIC Injection Valve Hand switch @ Panel 1H13-P601 | In Service | In Service | |
| 168 | 1E51A-S008 | RCIC Lube Oil Cooling Flow Valve Hand switch @ Panel 1H13-P601 | In Service | In Service | |
| 165 | 1E51A-S009 | RCIC Min Flow Return to Suppression Pool Valve Hand switch @ Panel 1H13-P601 | In Service | In Service | |
| 162 | 1E51A-S010 | RCIC Suppression Pool Suction Valve Hand switch @ Panel 1H13-P601 | In Service | In Service | |
| 157 | 1E51A-S014 | RCIC Barometric Condenser Condensate Pump Hand switch @ Panel 1H13-P601 | In Service | In Service | |
| 159 | 1E51A-S015 | RCIC Barometric Condenser Vacuum Pump Hand switch @ Panel 1H13-P601 | In Service | In Service | |
| 154 | 1E51A-S026 | RCIC Turbine Trip & Throttle Valve Hand switch @ Panel 1H13-P601 | In Service | In Service | |
| 148 | 1E51-C001 | RCIC Pump | Standby | In Service | |
| 147 | 1E51-C002 | RCIC Turbine & Barometric Condenser | Standby | In Service | |
| 156 | 1E51-C004 | RCIC Barometric Condenser Condensate Pump (DC) | Standby | In Service | |
| 158 | 1E51-C005 | RCIC Barometric Condenser Vacuum Pump (DC) | Standby | In Service | |
| 169 | 1E51-F010 | RCIC CST Suction Valve (DC) | In Service - Open | In Service - Closed | |
| 160 | 1E51-F013 | RCIC Injection Valve (DC) | In Service - Closed | In Service - Open | |
| 164 | 1E51-F019 | RCIC Min Flow Return to Suppression Pool Valve (DC) | In Service | In Service | |

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|--|------------------------|-------------------------|-------|
| 163 | 1E51-F031 | RCIC Suppression Pool Suction Valve (DC) | In Service - Closed | In Service - Open | |
| 151 | 1E51-F045 | RCIC Steam Inlet MOV (DC) | In Service - Closed | In Service - Open | |
| 167 | 1E51-F046 | RCIC Lube Oil Cooling Flow Valve | In Service - Closed | In Service - Open | |
| 153 | 1E51-F360 | RCIC Turbine Trip & Throttle Valve (DC) | In Service - Closed | In Service - Open | |
| 155 | 1E51-F361 | RCIC Governor Valve (HO) | In Service - Closed | In Service - Open | |
| 205 | 1E51-K601 | RCIC Square Root Converter @ Panel 1H13-P601 | In Service | In Service | |
| 203 | 1E51-N003 | RCIC Flow Transmitter @ Panel 1H22-P017 | In Service | In Service | |
| 241 | 1E51-N006 | Pressure Switch in Cabinet 1H22-P017 | Open Contact | Open Contact | |
| 84 | 1E51-N007 | RCIC Steam Supply Pressure Xmtr @ Panel 1H22-P017 | In Service | In Service | |
| 242 | 1E51-N009A | Pressure Switch in Cabinet 1H22-P017 | Open Contact | Open Contact | |
| 243 | 1E51-N009B | Pressure Switch in Cabinet 1H22-P017 | Open Contact | Open Contact | |
| 244 | 1E51-N012A | Pressure Switch in Cabinet 1H22-P017 | Open Contact | Open Contact | |
| 245 | 1E51-N012B | Pressure Switch in Cabinet 1H22-P029 | Open Contact | Open Contact | |
| 246 | 1E51-N012C | Pressure Switch in Cabinet 1H22-P017 | Open Contact | Open Contact | |
| 247 | 1E51-N012D | Pressure Switch in Cabinet 1H22-P029 | Open Contact | Open Contact | |
| 149 | 1E51-R600 | RCIC Pump Discharge Flow Controller | Standby | In Service | |
| 83 | 1E51-R602 | RCIC Steam Supply Pressure Indicator @ Panel 1H13-P601 | In Service | In Service | |
| 150 | 1E51-R606 | RCIC Pump Discharge Flow Indicator @ Panel 1H13-P601 | Standby | In Service | |
| 23 | 1EI-DC055 | 250VDC System Battery Volts Indicator @ Panel 1PM01J | In Service | In Service | |
| 25 | 1EI-DC056 | 250VDC System Battery Charger Volts Indicator @ Panel 1PM01J | In Service | In Service | |
| 6 | 1EI-DC057 | 125VDC Battery Voltage Indicator @ Panel 1PM01J (Div. 1) | In Service | In Service | |
| 8 | 1EI-DC058 | 125VDC Battery Charger Volts Indicator @ Panel 1PM01J (Div. 1) | In Service | In Service | |
| 15 | 1EI-DC059 | 125VDC Battery Voltage Indicator @ Panel 1PM01J (Div. 2) | In Service | In Service | |
| 17 | 1EI-DC060 | 125VDC Battery Charger Volts Indicator @ Panel 1PM01J (Div. 2) | In Service | In Service | |
| 248 | 1H13-P601 | Emerg. Core Cool System Panel | In Service | In Service | |
| 249 | 1H13-P612 | FEEDWATER / RECIRC VERTICAL BOARD | In Service | In Service | |
| 250 | 1H13-P618 | DIVISION II RHR RELAY VERTICAL BOARD | In Service | In Service | |
| 251 | 1H13-P621 | RCIC RELAY PANEL | In Service | In Service | |

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|--|------------------------|-------------------------|-------------------|
| 252 | 1H13-P628 | ADS SRV Panel | In Service | In Service | |
| 253 | 1H13-P629 | DIVISION I - LPCS / RHR RELAY VERTICAL BOARD | In Service | In Service | |
| 254 | 1H13-P631 | AUTOMATIC DEPRESSURIZATION SYS B RELAY VERTICAL BOARD | In Service | In Service | |
| 255 | 1H22-P017 | RCIC Instrument Rack | In Service | In Service | |
| 256 | 1H22-P029 | Instrumentation Cabinets | In Service | In Service | |
| 62 | 1HS-DO01 | Diesel Generator Fuel Transfer Pump Hand switch | In Service | In Service | |
| 24 | 1II-DC049 | 250VDC System Battery Amps Indicator @ Panel 1PM01J | In Service | In Service | |
| 26 | 1II-DC050 | 250VDC System Battery Charger Amps Indicator @ Panel 1PM01J | In Service | In Service | |
| 7 | 1II-DC051 | 125VDC Battery Amps Indicator @ Panel 1PM01J (Div. 1) | In Service | In Service | |
| 9 | 1II-DC052 | 125VDC Battery Charger Amps Indicator @ Panel 1PM01J (Div. 1) | In Service | In Service | |
| 16 | 1II-DC053 | 125VDC Battery Amps Indicator @ Panel 1PM01J (Div. 2) | In Service | In Service | |
| 18 | 1II-DC054 | 125VDC Battery Charger Amps Indicator @ Panel 1PM01J (Div. 2) | In Service | In Service | |
| 257 | 1IN035 | A N2 MANIFOLD PRESS REG | In Service | In Service | |
| 258 | 1IN038 | B N2 MANIFOLD PRESS REG | In Service | In Service | |
| 139 | 1IN09MA | Nitrogen Bottle Bank (South Side) Gas Manifold System | In Service | In Service | Passive Component |
| 140 | 1IN09MB | Nitrogen Bottle Bank (North Side) Gas Manifold System | In Service | In Service | Passive Component |
| 215 | 1LI-CM192 | Wide Range Suppression Pool Water Level @1H13-P601 panel | In Service | In Service | |
| 259 | 1LT-CM030 | SUP POOL WIDE RANGE LEVEL XMTR | In Service | In Service | |
| 211 | 1PI-CM029 | Wide Range DW Pressure @1H13-P601 panel | In Service | In Service | |
| 213 | 1PI-CM056 | S-POOL PRESS | In Service | In Service | |
| 260 | 1PM01J | Battery Charger Panel | In Service | In Service | |
| 261 | 1PM16J | ASSY - PANEL, P/C MONITOR/LEAK DETECTION | In Service | In Service | |
| 262 | 1PT-CM029 | PAM WIDE RANGE DRYWELL PRESS TRANSMITTER | In Service | In Service | |
| 263 | 1PT-CM056 | SUP POOL PRESS XMTR | In Service | In Service | |
| 91 | 1TI-CM037 | Suppression Pool Water Temperature Indicator @ Panel 1C61-P001 | In Service | In Service | |
| 87 | 1TI-CM045 | Drywell Temperature Indicator @ Panel 1C61-P001 | In Service | In Service | |

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|--|------------------------|-------------------------|---|
| 166 | No EPN | RCIC Lube Oil Cooler | In Service | In Service | Passive Component; Rule of the Box (ROB) component to parent 1E51-C001 |
| 207 | No EPN | RCIC Woodward Governor (on RCIC Turbine) | In Service | In Service | ROB to parent 1E51- C001 |

Attachment B – LaSalle County Generating Station Unit 2 ESEL

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|--|------------------------|-------------------------|-------------------|
| 56 | 235X | 480VAC Sw. Gr. (2AP19E) (Div. 1) | In Service | In Service | |
| 30 | 235X-3 | 480VAC MCC (2AP73E)(Div. 1) | In Service | In Service | |
| 57 | 236X | 480VAC Sw. Gr. (2AP21E) (Div. 2) | In Service | In Service | |
| 39 | 236X-3 | 480VAC MCC (2AP81E)(Div. 2) | In Service | In Service | |
| 58 | 236Y | 480VAC Sw. Gr. (2AP22E) (Div. 2) | In Service | In Service | |
| 264 | 236Y-1 | 480V MCC (2AP82E) | In Service | In Service | |
| 119 | 2B21-A003C | "C" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 122 | 2B21-A003D | "D" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 125 | 2B21-A003E | "E" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 128 | 2B21-A003R | "R" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 131 | 2B21-A003S | "S" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 134 | 2B21-A003U | "U" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 137 | 2B21-A003V | "V" ADS SRV Accumulator | In Service | In Service | Passive Component |
| 120 | 2B21C-S008A | "C" ADS SRV Hand switch @ Panel 2H13-P628 | In Service | In Service | |
| 123 | 2B21C-S009A | "D" ADS SRV Hand switch @ Panel 2H13-P628 | In Service | In Service | |
| 126 | 2B21C-S010A | "E" ADS SRV Hand switch @ Panel 2H13-P628 | In Service | In Service | |
| 129 | 2B21C-S011A | "R" ADS SRV Hand switch @ Panel 2H13-P628 | In Service | In Service | |
| 132 | 2B21C-S012A | "S" ADS SRV Hand switch @ Panel 2H13-P628 | In Service | In Service | |
| 135 | 2B21C-S013A | "U" ADS SRV Hand switch @ Panel 2H13-P628 | In Service | In Service | |
| 138 | 2B21C-S014A | "V" ADS SRV Hand switch @ Panel 2H13-P628 | In Service | In Service | |
| 118 | 2B21-F013C | "C" ADS SRV | In Service | In Service | |
| 121 | 2B21-F013D | "D" ADS SRV | In Service | In Service | |
| 124 | 2B21-F013E | "E" ADS SRV | In Service | In Service | |
| 127 | 2B21-F013R | "R" ADS SRV | In Service | In Service | |
| 130 | 2B21-F013S | "S" ADS SRV | In Service | In Service | |
| 133 | 2B21-F013U | "U" ADS SRV | In Service | In Service | |
| 136 | 2B21-F013V | "V" ADS SRV | In Service | In Service | |
| 74 | 2B21-N026DA | RPV Level Transmitter (feeds 2C61-R010) | In Service | In Service | |
| 72 | 2C61-N006 | RPV Pressure Transmitter (feeds 2C61-R011) | In Service | In Service | |
| 265 | 2C61-P001 | Instrument Panel | In Service | In Service | |
| 73 | 2C61-R010 | RPV Level (WR) Indicator @ Panel 2C61-P001 | Standby | In Service | |
| 71 | 2C61-R011 | RPV Pressure Indicator @ Panel 2C61-P001 | Standby | In Service | |
| 45 | 2DC01E | 250V Battery (Div. 1) | In Service | In Service | |
| 46 | 2DC02E | 250VDC Bus #1 | In Service | In Service | |
| 48 | 2DC03E | 250VDC Battery Charger #2 | In Service | In Service | |

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|---|------------------------|-------------------------|--|
| 47 | 2DC06E | 250VDC MCC 221Y | In Service | In Service | |
| 27 | 2DC07E | 125V Battery 2A (Div. 1) | In Service | In Service | |
| 28 | 2DC08E | 125VDC Bus 2A (Div. 1) | In Service | In Service | |
| 31 | 2DC09E | 125VDC Battery Main Charger 2AA | In Service | In Service | |
| 29 | 2DC11E | 125VDC Dist. Panel 211Y (Div. 1) | In Service | In Service | |
| 38 | 2DC13E | 125VDC Dist. Panel 212Y (Div. 2) | In Service | In Service | |
| 36 | 2DC14E | 125V Battery 2B (Div. 2) | In Service | In Service | |
| 37 | 2DC15E | 125VDC Bus 2B (Div. 2) | In Service | In Service | |
| 40 | 2DC17E | 125VDC Battery Main Charger 2BA | In Service | In Service | |
| 266 | 2DG03J | Diesel Panel | In Service | In Service | |
| 65 | 2DO01P | Diesel Generator Fuel Transfer Pump (Div. 2) | In Service | In Service | |
| 63 | 2DO01T | Diesel Fuel Storage Tank (Div. 2) | In Service | In Service | Passive Component |
| 64 | 2DO05T | Diesel Generator Day Tank (Div. 2) | In Service | In Service | Passive Component |
| 267 | 2E12-B001B | 2B RHR HEAT EXCHANGER | Available | Available | Passive Component |
| 210 | 2E12-F016B | B' RHR Outboard Primary Containment Spray Isolation Valve | In Service | In Service | Manually open as needed |
| 202 | 2E12-F027B | "B" RHR Suppression Chamber Spray Valve | In Service - Closed | In Service - Open | Manually open as needed |
| 201 | 2E12-F042B | "B" RHR (LPCI) RPV Injection Valve | In Service - Closed | In Service - Open | Manually open as needed |
| 268 | 2E31-N022A | Pressure Switch in Cabinet 2H22-P017 | Open Contact | Open Contact | |
| 269 | 2E31-N022B | Pressure Switch in Cabinet 2H22-P029 | Open Contact | Open Contact | |
| 270 | 2E31-N022C | Pressure Switch in Cabinet 2H22-P017 | Open Contact | Open Contact | |
| 271 | 2E31-N022D | Pressure Switch in Cabinet 2H22-P029 | Open Contact | Open Contact | |
| 272 | 2E51A-K015 | Relay in Cabinet 2H13-P621 | De-Energized | De-Energized | |
| 273 | 2E51A-K029 | Relay in Cabinet 2H13-P621 | De-Energized | De-Energized | |
| 274 | 2E51A-K032 | Relay in Cabinet 2H13-P618 | De-Energized | De-Energized | Four second time delay pick-up relay controlled by 2E31-N007BA. Time delay prevents chatter on 2E31-N007BA from affecting control circuit. |
| 275 | 2E51A-K033 | Relay in Cabinet 2H13-P618 | De-Energized | De-Energized | |
| 276 | 2E51A-K039 | Relay in Cabinet 2H13-P618 | De-Energized | De-Energized | |
| 277 | 2E51A-K047 | Relay in Cabinet 2H13-P621 | De-Energized | De-Energized | Four second time delay pick-up relay controlled by 2E31-N013AA. Time delay prevents chatter on 2E31-N013AA from affecting control circuit. |

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|--|------------------------|-------------------------|--|
| 278 | 2E51A-K048 | Relay in Cabinet 2H13-P618 | De-Energized | De-Energized | Four second time delay pick-up relay controlled by 2E31-N013BA. Time delay prevents chatter on 2E31-N013BA from affecting control circuit. |
| 279 | 2E51A-K054 | Relay in Cabinet 2H13-P621 | De-Energized | De-Energized | |
| 280 | 2E51A-K055 | Relay in Cabinet 2H13-P621 | De-Energized | De-Energized | |
| 281 | 2E51A-K057 | Relay in Cabinet 2H13-P618 | De-Energized | De-Energized | |
| 282 | 2E51A-K058 | Relay in Cabinet 2H13-P618 | De-Energized | De-Energized | |
| 283 | 2E51A-K006 | Relay in Cabinet 2H13-P621 | De-Energized | De-Energized | |
| 284 | 2E51A-K060 | Relay in Cabinet 2H13-P618 | De-Energized | De-Energized | |
| 285 | 2E51A-K007 | Relay in Cabinet 2H13-P621 | De-Energized | De-Energized | |
| 286 | 2E51A-K008 | Relay in Cabinet 2H13-P621 | De-Energized | De-Energized | |
| 176 | 2E51A-S003 | RCIC Steam Inlet MOV Hand switch @ Panel 2H13-P601 | In Service | In Service | |
| 194 | 2E51A-S004 | RCIC CST Suction Valve Hand switch @ Panel 2H13-P601 | In Service | In Service | |
| 185 | 2E51A-S005 | RCIC Injection Valve Hand switch @ Panel 2H13-P601 | In Service | In Service | |
| 192 | 2E51A-S008 | RCIC Turbine Cooling Water Supply Valve Hand switch @ Panel 2H13-P601 | In Service | In Service | |
| 189 | 2E51A-S009 | RCIC Min Flow Bypass to Suppression Pool Valve Hand switch @ Panel 2H13-P601 | In Service | In Service | |
| 186 | 2E51A-S010 | RCIC Suppression Pool Suction Valve Hand switch @ Panel 2H13-P601 | In Service | In Service | |
| 181 | 2E51A-S014 | RCIC Barometric Condenser Condensate Pump Hand switch @ Panel 2H13-P601 | In Service | In Service | |
| 183 | 2E51A-S015 | RCIC Barometric Condenser Vacuum Pump Hand switch @ Panel 2H13-P601 | In Service | In Service | |
| 178 | 2E51A-S026 | RCIC Turbine Trip & Throttle Valve Hand switch @ Panel 2H13-P601 | In Service | In Service | |
| 172 | 2E51-C001 | RCIC Pump | Standby | In Service | |
| 171 | 2E51-C002 | RCIC Turbine & Barometric Condenser | Standby | In Service | |
| 180 | 2E51-C004 | RCIC Barometric Condenser Condensate Pump (DC) | Standby | In Service | |
| 182 | 2E51-C005 | RCIC Barometric Condenser Vacuum Pump (DC) | Standby | In Service | |
| 193 | 2E51-F010 | RCIC CST Suction Valve (DC) | In Service - Open | In Service - Closed | |
| 184 | 2E51-F013 | RCIC Injection Valve (DC) | In Service - Closed | In Service - Open | |
| 188 | 2E51-F019 | RCIC Min Flow Return to Suppression Pool Valve (DC) | In Service | In Service | |

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|--|------------------------|-------------------------|-------|
| 187 | 2E51-F031 | RCIC Suppression Pool Suction Valve (DC) | In Service - Closed | In Service - Open | |
| 175 | 2E51-F045 | RCIC Steam Inlet MOV (DC) | In Service - Closed | In Service - Open | |
| 191 | 2E51-F046 | RCIC Lube Oil Cooling Flow Valve | In Service - Closed | In Service - Open | |
| 177 | 2E51-F360 | RCIC Turbine Trip & Throttle Valve (DC) | In Service - Closed | In Service - Open | |
| 179 | 2E51-F361 | RCIC Governor Valve (HO) | In Service - Closed | In Service - Open | |
| 206 | 2E51-K601 | RCIC Square Root Converter @ Panel 2H13-P601 | In Service | In Service | |
| 204 | 2E51-N003 | RCIC Flow Transmitter @ Panel 2H22-P017 | In Service | In Service | |
| 287 | 2E51-N006 | Pressure Switch in Cabinet 2H22-P017 | Open Contact | Open Contact | |
| 86 | 2E51-N007 | RCIC Steam Supply Pressure Xmtr @ Panel 2H22-P017 | In Service | In Service | |
| 288 | 2E51-N009A | Pressure Switch in Cabinet 2H22-P017 | Open Contact | Open Contact | |
| 289 | 2E51-N009B | Pressure Switch in Cabinet 2H22-P017 | Open Contact | Open Contact | |
| 290 | 2E51-N012A | Pressure Switch in Cabinet 2H22-P017 | Open Contact | Open Contact | |
| 291 | 2E51-N012B | Pressure Switch in Cabinet 2H22-P029 | Open Contact | Open Contact | |
| 292 | 2E51-N012C | Pressure Switch in Cabinet 2H22-P017 | Open Contact | Open Contact | |
| 293 | 2E51-N012D | Pressure Switch in Cabinet 2H22-P029 | Open Contact | Open Contact | |
| 173 | 2E51-R600 | RCIC Pump Discharge Flow Controller | Standby | In Service | |
| 85 | 2E51-R602 | RCIC Steam Supply Pressure Indicator @ Panel 2H13-P601 | In Service | In Service | |
| 174 | 2E51-R606 | RCIC Pump Discharge Flow Indicator @ Panel 2H13-P601 | Standby | In Service | |
| 49 | 2EI-DC055 | 250VDC System Battery Volts Indicator @ Panel 2PM01J | In Service | In Service | |
| 51 | 2EI-DC056 | 250VDC System Battery Charger Volts Indicator @ Panel 2PM01J | In Service | In Service | |
| 32 | 2EI-DC057 | 125VDC Battery Voltage Indicator @ Panel 2PM01J (Div. 1) | In Service | In Service | |
| 34 | 2EI-DC058 | 125VDC Battery Charger Volts Indicator @ Panel 2PM01J (Div. 1) | In Service | In Service | |
| 41 | 2EI-DC059 | 125VDC Battery Voltage Indicator @ Panel 2PM01J (Div. 2) | In Service | In Service | |
| 43 | 2EI-DC060 | 125VDC Battery Charger Volts Indicator @ Panel 2PM01J (Div. 2) | In Service | In Service | |
| 294 | 2H13-P601 | Emerg. Core Cool System Panel | In Service | In Service | |
| 295 | 2H13-P612 | ASSY - PANEL, FEED WATER/RECIRCULATION | In Service | In Service | |
| 296 | 2H13-P618 | ASSY - PANEL, DIV-2 RHR RELAY | In Service | In Service | |
| 297 | 2H13-P621 | ASSY - PANEL, RI RELAY | In Service | In Service | |

| Item # | Equipment ID | Description | Equipment Normal State | Equipment Desired State | Notes |
|--------|--------------|--|------------------------|-------------------------|--|
| 298 | 2H13-P628 | ADS SRV Panel | In Service | In Service | |
| 299 | 2H13-P629 | ASSY - PANEL, DIV-1 LPCS/RHR RELAY | In Service | In Service | |
| 300 | 2H13-P631 | ASSY - PANEL, AUTOMATIC DEPRESSION SYST B RELAY | In Service | In Service | |
| 301 | 2H22-P017 | RCIC Transmitter Panel | In Service | In Service | |
| 302 | 2H22-P029 | Instrumentation Cabinets | In Service | In Service | |
| 66 | 2HS-DO01 | Diesel Generator Fuel Transfer Pump Hand switch | In Service | In Service | |
| 50 | 2II-DC049 | 250VDC System Battery Amps Indicator @ Panel 2PM01J | In Service | In Service | |
| 52 | 2II-DC050 | 250VDC System Battery Charger Amps Indicator @ Panel 2PM01J | In Service | In Service | |
| 33 | 2II-DC051 | 125VDC Battery Amps Indicator @ Panel 2PM01J (Div. 1) | In Service | In Service | |
| 35 | 2II-DC052 | 125VDC Battery Charger Amps Indicator @ Panel 2PM01J (Div. 1) | In Service | In Service | |
| 42 | 2II-DC053 | 125VDC Battery Amps Indicator @ Panel 2PM01J (Div. 2) | In Service | In Service | |
| 44 | 2II-DC054 | 125VDC Battery Charger Amps Indicator @ Panel 2PM01J (Div. 2) | In Service | In Service | |
| 303 | 2IN035 | VALVE, U2 SOUTH BANK IN REG | In Service | In Service | |
| 304 | 2IN038 | VALVE, NORTH BANK IN REG | In Service | In Service | |
| 143 | 2IN09MA | Nitrogen Bottle Bank (South Side) Gas Manifold System | In Service | In Service | Passive Component |
| 144 | 2IN09MB | Nitrogen Bottle Bank (North Side) Gas Manifold System | In Service | In Service | Passive Component |
| 216 | 2LI-CM192 | Wide Range Suppression Pool Water Level @2H13-P601 panel | In Service | In Service | |
| 305 | 2LT-CM030 | S-POOL WIDE RANGE LVL XMITTER | In Service | In Service | |
| 212 | 2PI-CM029 | Wide Range DW Pressure @2H13-P601 panel | In Service | In Service | |
| 214 | 2PI-CM056 | S-POOL PRESS | In Service | In Service | |
| 306 | 2PM01J | Battery Charger Panel | In Service | In Service | |
| 307 | 2PM16J | ASSY - PANEL, P/C MONITOR/LEAK DETECTION | In Service | In Service | |
| 308 | 2PT-CM029 | DW PRESS WIDE RANGE PRESS XMITTER | In Service | In Service | |
| 309 | 2PT-CM056 | S-POOL PRESS XMITTER | In Service | In Service | |
| 92 | 2TI-CM037 | Suppression Pool Water Temperature Indicator @ Panel 2C61-P001 | In Service | In Service | |
| 88 | 2TI-CM045 | Drywell Temperature Indicator @ Panel 2C61-P001 | In Service | In Service | |
| 190 | No EPN | RCIC Lube Oil Cooler | In Service | In Service | Passive Component; ROB to parent 1E51-C001 |
| 208 | No EPN | RCIC Woodward Governor (on RCIC Turbine) | In Service | In Service | ROB to parent 1E51-C001 |

Attachment C - LaSalle Unit 1 ESEP HCLPF Values and Failure Mode Tabulation

Note: Some items listed on the ESEL were child components contained within host components. These child components are referred to as "Rule of Box" (ROB) items, for which the HCLPF capacities are identical to those of the host item.

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|---|------------------------|-----------|---|
| 135X | 480VAC Sw. Gr. (1AP19E) (Div. 1) | Equipment Capacity | 0.45 | Component is Rule Of Box to 1AP19E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 135X-3 | 480VAC MCC (1AP73E)(Div. 1) | Equipment Capacity | 0.45 | Component is Rule Of Box to 1AP73E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 136X | 480VAC Sw. Gr. (1AP21E) (Div. 2) | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1AP21E. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 136X-3 | 480VAC MCC (1AP81E)(Div. 2) | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1AP81E. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 136Y | 480VAC Sw. Gr. (1AP22E) (Div. 2) | Equipment Capacity | 0.45 | Component is Rule Of Box to 1AP22E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 136Y-1 | 480V MCC (1AP82E) | Equipment Capacity | 0.45 | Component is Rule Of Box to 1AP82E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1B21-A003C | "C" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 1B21-A003D | "D" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 1B21-A003E | "E" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 1B21-A003R | "R" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 1B21-A003S | "S" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 1B21-A003U | "U" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 1B21-A003V | "V" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 1B21C-S008A | "C" ADS SRV Hand switch @ Panel 1H13-P628 | Block Wall Interaction | 0.41 | Component is Rule Of Box to 1H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1B21C-S009A | "D" ADS SRV Hand switch @ Panel 1H13-P628 | Block Wall Interaction | 0.41 | Component is Rule Of Box to 1H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1B21C-S010A | "E" ADS SRV Hand switch @ Panel 1H13-P628 | Block Wall Interaction | 0.41 | Component is Rule Of Box to 1H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1B21C-S011A | "R" ADS SRV Hand switch @ Panel 1H13-P628 | Block Wall Interaction | 0.41 | Component is Rule Of Box to 1H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1B21C-S012A | "S" ADS SRV Hand switch @ Panel 1H13-P628 | Block Wall Interaction | 0.41 | Component is Rule Of Box to 1H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1B21C-S013A | "U" ADS SRV Hand switch @ Panel 1H13-P628 | Block Wall Interaction | 0.41 | Component is Rule Of Box to 1H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1B21C-S014A | "V" ADS SRV Hand switch @ Panel 1H13-P628 | Block Wall Interaction | 0.41 | Component is Rule Of Box to 1H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1B21-F013C | "C" ADS SRV | Screened | >RLGM | Component screened by SRT analysis ^{§§} |
| 1B21-F013D | "D" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 1B21-F013E | "E" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 1B21-F013R | "R" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 1B21-F013S | "S" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |

§§ "SRT analysis" involves the quantitative evaluation of applicable screening criteria or failure modes whereas "SRT judgment" relies upon SRT experience and training with qualitative basis for disposition.

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|---|------------------------------------|-----------|---|
| 1B21-F013U | "U" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 1B21-F013V | "V" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 1B21-N026DA | RPV Level Transmitter (feeds 1C61-R010) | Screened | >RLGM | Component screened by SRT judgment |
| 1C61-N006 | RPV Pressure Transmitter (feeds 1C61-R011) | Screened | >RLGM | Component screened by SRT judgment |
| 1C61-P001 | Panel | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1C61-R010 | RPV Level (WR) Indicator @ Panel 1C61-P001 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1C61-P001. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1C61-R011 | RPV Pressure Indicator @ Panel 1C61-P001 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1C61-P001. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC01E | 250V Battery (Div. 1) | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC02E | 250VDC Bus #1 | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC03E | 250VDC Battery Charger #1 | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC06E | 250VDC MCC 121Y | Equipment Capacity | 0.45 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC07E | 125V Battery 1A (Div. 1) | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC08E | 125VDC Bus 1A (Div. 1) | Block Wall Interaction | 0.4 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC09E | 125VDC Battery Main Charger 1AA | Block Wall Interaction | 0.4 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC11E | 125VDC Dist. Panel 111Y (Div. 1) | Block Wall Interaction | 0.4 | Component is Rule of Box to 1DC08E. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC13E | 125VDC Dist. Panel 112Y (Div. 2) | Equipment Capacity | 0.45 | Component is Rule of Box to 1DC15E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC14E | 125V Battery 1B (Div. 2) | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC15E | 125VDC Bus 1B (Div. 2) | Equipment Capacity | 0.45 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DC17E | 125VDC Battery Main Charger 1BA | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DG03J | Diesel Panel | Equipment Capacity | 0.45 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1DO01P | Diesel Generator Fuel Transfer Pump (Div. 2) | Screened | >RLGM | Component screened by SRT judgment. |
| 1DO01T | Diesel Fuel Storage Tank (Div. 2) | Equipment Capacity | 0.45 | Component evaluated by HCLPF calculation 14Q4238-CAL-004. |
| 1DO05T | Diesel Generator Day Tank (Div. 2) | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-004. |
| 1E12-B001B | B RHR HEAT EXCHANGER | Anchorage / Block Wall Interaction | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; evaluated by HCLPF calculation 14Q4238-CAL-004. |
| 1E12-F016B | B' RHR Outboard Primary Containment Spray Isolation Valve | Screened | >RLGM | Component screened by SRT analysis. |
| 1E12-F027B | "B" RHR Suppression Chamber Spray Valve | Block Wall Interaction | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component screened by SRT judgment. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--------------------------------------|------------------------|-----------|--|
| 1E12-F042B | "B" RHR (LPCI) RPV Injection Valve | Screened | >RLGM | Component screened by SRT analysis. |
| 1E31-N022A | Pressure Switch in Cabinet 1H22-P017 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E31-N022B | Pressure Switch in Cabinet 1H22-P029 | Screened | >RLGM | Component is Rule Of Box to 1H22-P029. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E31-N022C | Pressure Switch in Cabinet 1H22-P017 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E31-N022D | Pressure Switch in Cabinet 1H22-P029 | Screened | >RLGM | Component is Rule Of Box to 1H22-P029. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E51A-K015 | Relay in Cabinet 1H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K029 | Relay in Cabinet 1H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K032 | Relay in Cabinet 1H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K033 | Relay in Cabinet 1H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K039 | Relay in Cabinet 1H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K047 | Relay in Cabinet 1H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K048 | Relay in Cabinet 1H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K054 | Relay in Cabinet 1H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K055 | Relay in Cabinet 1H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K057 | Relay in Cabinet 1H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K058 | Relay in Cabinet 1H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K006 | Relay in Cabinet 1H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K060 | Relay in Cabinet 1H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--|------------------------|-----------|--|
| 1E51A-K007 | Relay in Cabinet 1H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-K008 | Relay in Cabinet 1H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1E51A-S003 | RCIC Steam Inlet MOV Hand switch @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51A-S004 | RCIC CST Suction Valve Hand switch @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51A-S005 | RCIC Injection Valve Hand switch @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51A-S008 | RCIC Lube Oil Cooling Flow Valve Hand switch @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51A-S009 | RCIC Min Flow Return to Suppression Pool Valve Hand switch @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51A-S010 | RCIC Suppression Pool Suction Valve Hand switch @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51A-S014 | RCIC Barometric Condenser Condensate Pump Hand switch @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51A-S015 | RCIC Barometric Condenser Vacuum Pump Hand switch @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51A-S026 | RCIC Turbine Trip & Throttle Valve Hand switch @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51-C001 | RCIC Pump | Block Wall Interaction | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; anchorage is evaluated in 14Q4238-CAL-004. |
| 1E51-C002 | RCIC Turbine & Barometric Condenser | Block Wall Interaction | 0.37 | Component and anchorage screened by SRT judgment. Adjacent block wall evaluated in 14Q4238-CAL-003 |
| 1E51-C004 | RCIC Barometric Condenser Condensate Pump (DC) | Block Wall Interaction | 0.37 | Component is Rule Of Box to 1E51-C002. Host component screened by SRT judgment. Adjacent block wall evaluated in 14Q4238-CAL-003 |
| 1E51-C005 | RCIC Barometric Condenser Vacuum Pump (DC) | Block Wall Interaction | 0.37 | Component is Rule Of Box to 1E51-C002. Host component screened by SRT judgment. Adjacent block wall evaluated in 14Q4238-CAL-003. |
| 1E51-F010 | RCIC CST Suction Valve (DC) | Screened | >RLGM | Component screened by SRT judgment. |
| 1E51-F013 | RCIC Injection Valve (DC) | Screened | >RLGM | Component screened by SRT judgment. |
| 1E51-F019 | RCIC Min Flow Return to Suppression Pool Valve (DC) | Screened | >RLGM | Component screened by SRT analysis. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--|------------------------|-----------|--|
| 1E51-F031 | RCIC Suppression Pool Suction Valve (DC) | Screened | >RLGM | Component screened by SRT judgment. |
| 1E51-F045 | RCIC Steam Inlet MOV (DC) | Block Wall Interaction | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component screened by SRT judgment. |
| 1E51-F046 | RCIC Lube Oil Cooling Flow Valve | Screened | >RLGM | Component screened by SRT analysis. |
| 1E51-F360 | RCIC Turbine Trip & Throttle Valve (DC) | Block Wall Interaction | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component screened by SRT judgment. |
| 1E51-F361 | RCIC Governor Valve (HO) | Block Wall Interaction | 0.37 | Component is Rule of Box to 1E51-C001. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per screened; anchorage is evaluated in 14Q4238-CAL-004. |
| 1E51-K601 | RCIC Square Root Converter @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51-N003 | RCIC Flow Transmitter @ Panel 1H22-P017 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Host component screened by SRT analysis. |
| 1E51-N006 | Pressure Switch in Cabinet 1H22-P017 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E51-N007 | RCIC Steam Supply Pressure Xmtr @ Panel 1H22-P017 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Host component screened by SRT analysis. |
| 1E51-N009A | Pressure Switch in Cabinet 1H22-P017 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E51-N009B | Pressure Switch in Cabinet 1H22-P017 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E51-N012A | Pressure Switch in Cabinet 1H22-P017 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E51-N012B | Pressure Switch in Cabinet 1H22-P029 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E51-N012C | Pressure Switch in Cabinet 1H22-P017 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E51-N012D | Pressure Switch in Cabinet 1H22-P029 | Screened | >RLGM | Component is Rule Of Box to 1H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 1E51-R600 | RCIC Pump Discharge Flow Controller | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51-R602 | RCIC Steam Supply Pressure Indicator @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1E51-R606 | RCIC Pump Discharge Flow Indicator @ Panel 1H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1EI-DC055 | 250VDC System Battery Volts Indicator @ Panel 1PM01J | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1EI-DC056 | 250VDC System Battery Charger Volts Indicator @ Panel 1PM01J | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1EI-DC057 | 125VDC Battery Voltage Indicator @ Panel 1PM01J (Div. 1) | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1EI-DC058 | 125VDC Battery Charger Volts Indicator @ Panel 1PM01J (Div. 1) | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--|------------------------|-----------|---|
| 1EI-DC059 | 125VDC Battery Voltage Indicator @ Panel 1PM01J (Div. 2) | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1EI-DC060 | 125VDC Battery Charger Volts Indicator @ Panel 1PM01J (Div. 2) | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1H13-P601 | Emerg. Core Cool System Panel | Equipment Capacity | 0.37 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade.. |
| 1H13-P612 | FEEDWATER / RECIRC VERTICAL BOARD | Block Wall Interaction | 0.41 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1H13-P618 | DIVISION II RHR RELAY VERTICAL BOARD | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1H13-P621 | RCIC RELAY PANEL | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1H13-P628 | ADS SRV Panel | Block Wall Interaction | 0.41 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1H13-P629 | DIVISION I - LPCS / RHR RELAY VERTICAL BOARD | Block Wall Interaction | 0.41 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1H13-P631 | AUTOMATIC DEPRESSURIZATION SYS B RELAY VERTICAL BOARD | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1H22-P017 | RCIC Instrument Rack | Screened | >RLGM | Component screened by SRT analysis. |
| 1H22-P029 | Instrumentation Cabinets | Screened | >RLGM | Component screened by SRT analysis. |
| 1HS-DO01 | Diesel Generator Fuel Transfer Pump Hand switch | Equipment Capacity | 0.45 | Component is Rule Of Box to 1DG03J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1II-DC049 | 250VDC System Battery Amps Indicator @ Panel 1PM01J | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1II-DC050 | 250VDC System Battery Charger Amps Indicator @ Panel 1PM01J | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1II-DC051 | 125VDC Battery Amps Indicator @ Panel 1PM01J (Div. 1) | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1II-DC052 | 125VDC Battery Charger Amps Indicator @ Panel 1PM01J (Div. 1) | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1II-DC053 | 125VDC Battery Amps Indicator @ Panel 1PM01J (Div. 2) | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1II-DC054 | 125VDC Battery Charger Amps Indicator @ Panel 1PM01J (Div. 2) | Equipment Capacity | 0.37 | Component is Rule Of Box to 1PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1IN035 | A N2 MANIFOLD PRESS REG | Screened | >RLGM | Component screened by SRT judgment. |
| 1IN038 | B N2 MANIFOLD PRESS REG | Screened | >RLGM | Component screened by SRT judgment. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--|------------------------|-----------|---|
| 1IN09MA | Nitrogen Bottle Bank (South Side) Gas Manifold System | Screened | >RLGM | Component screened by SRT judgment. |
| 1IN09MB | Nitrogen Bottle Bank (North Side) Gas Manifold System | Screened | >RLGM | Component screened by SRT judgment. |
| 1LI-CM192 | Wide Range Suppression Pool Water Level @1H13-P601 panel | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade.. |
| 1LT-CM030 | SUP POOL WIDE RANGE LEVEL XMTR | Screened | >RLGM | Component screened by SRT judgment. |
| 1PI-CM029 | Wide Range DW Pressure @1H13-P601 panel | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1PI-CM056 | S-POOL PRESS | Equipment Capacity | 0.37 | Component is Rule Of Box to 1H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1PM01J | Battery Charger Panel | Equipment Capacity | 0.37 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1PM16J | ASSY - PANEL, P/C MONITOR/LEAK DETECTION | Equipment Capacity | 0.37 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 1PT-CM029 | PAM WIDE RANGE DRYWELL PRESS TRANSMITTER | Screened | >RLGM | Component screened by SRT judgment. |
| 1PT-CM056 | SUP POOL PRESS XMTR | Screened | >RLGM | Component screened by SRT judgment. |
| 1TI-CM037 | Suppression Pool Water Temperature Indicator @ Panel 1C61-P001 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1C61-P001. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 1TI-CM045 | Drywell Temperature Indicator @ Panel 1C61-P001 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 1C61-P001. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| No EPN 1 | RCIC Lube Oil Cooler | Block Wall Interaction | 0.37 | Component is Rule of Box to 1E51-C001. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per screened; anchorage is evaluated in 14Q4238-CAL-004. |
| No EPN 2 | RCIC Woodward Governor (on RCIC Turbine) | Block Wall Interaction | 0.37 | Component is Rule of Box to 1E51-C001. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per screened; anchorage is evaluated in 14Q4238-CAL-004. |

Attachment D - LaSalle Unit 2 ESEP HCLPF Values and Failure Mode Tabulation

Note: Some items listed on the ESEL were child components contained within host components. These child components are referred to as "Rule of Box" (ROB) items, for which the HCLPF capacities are identical to those of the host item.

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|---|------------------------|-----------|---|
| 235X | 480VAC Sw. Gr. (2AP19E) (Div. 1) | Equipment Capacity | 0.45 | Component is Rule Of Box to 2AP19E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 235X-3 | 480VAC MCC (2AP73E)(Div. 1) | Equipment Capacity | 0.45 | Component is Rule Of Box to 2AP73E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 236X | 480VAC Sw. Gr. (2AP21E) (Div. 2) | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2AP21E. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 236X-3 | 480VAC MCC (2AP81E)(Div. 2) | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2AP81E. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 236Y | 480VAC Sw. Gr. (2AP22E) (Div. 2) | Equipment Capacity | 0.45 | Component is Rule Of Box to 2AP22E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 236Y-1 | 480V MCC (2AP82E) | Equipment Capacity | 0.45 | Component is Rule Of Box to 2AP82E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2B21-A003C | "C" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 2B21-A003D | "D" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 2B21-A003E | "E" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 2B21-A003R | "R" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 2B21-A003S | "S" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 2B21-A003U | "U" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 2B21-A003V | "V" ADS SRV Accumulator | Equipment Capacity | 0.37 | Component evaluated by HCLPF calculation 14Q4238-CAL-002 and located >40' above grade. |
| 2B21C-S008A | "C" ADS SRV Hand switch @ Panel 2H13-P628 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2B21C-S009A | "D" ADS SRV Hand switch @ Panel 2H13-P628 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2B21C-S010A | "E" ADS SRV Hand switch @ Panel 2H13-P628 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2B21C-S011A | "R" ADS SRV Hand switch @ Panel 2H13-P628 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2B21C-S012A | "S" ADS SRV Hand switch @ Panel 2H13-P628 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2B21C-S013A | "U" ADS SRV Hand switch @ Panel 2H13-P628 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2B21C-S014A | "V" ADS SRV Hand switch @ Panel 2H13-P628 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P628. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2B21-F013C | "C" ADS SRV | Screened | >RLGM | Component screened by SRT analysis ^{***} |
| 2B21-F013D | "D" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 2B21-F013E | "E" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 2B21-F013R | "R" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 2B21-F013S | "S" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |

*** "SRT analysis" involves the quantitative evaluation of applicable screening criteria or failure modes whereas "SRT judgment" relies upon SRT experience and training with qualitative basis for disposition.

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|---|--------------------------------|-----------|---|
| 2B21-F013U | "U" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 2B21-F013V | "V" ADS SRV | Screened | >RLGM | Component screened by SRT analysis |
| 2B21-N026DA | RPV Level Transmitter (feeds 2C61-R010) | Screened | >RLGM | Component screened by SRT judgment |
| 2C61-N006 | RPV Pressure Transmitter (feeds 2C61-R011) | Screened | >RLGM | Component screened by SRT judgment |
| 2C61-P001 | Instrument Panel | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2C61-R010 | RPV Level (WR) Indicator @ Panel 2C61-P001 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2C61-P001. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2C61-R011 | RPV Pressure Indicator @ Panel 2C61-P001 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2C61-P001. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC01E | 250V Battery (Div. 1) | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC02E | 250VDC Bus #1 | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC03E | 250VDC Battery Charger #2 | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC06E | 250VDC MCC 221Y | Equipment Capacity | 0.45 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC07E | 125V Battery 2A (Div. 1) | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC08E | 125VDC Bus 2A (Div. 1) | Equipment Capacity | 0.45 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC09E | 125VDC Battery Main Charger 2AA | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC11E | 125VDC Dist. Panel 211Y (Div. 1) | Equipment Capacity | 0.45 | Component is Rule of Box to 2DC08E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC13E | 125VDC Dist. Panel 212Y (Div. 2) | Equipment Capacity | 0.45 | Component is Rule of Box to 2DC15E. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC14E | 125V Battery 2B (Div. 2) | Block Wall Interaction | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC15E | 125VDC Bus 2B (Div. 2) | Equipment Capacity | 0.45 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DC17E | 125VDC Battery Main Charger 2BA | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DG03J | Diesel Panel | Equipment Capacity | 0.45 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2DO01P | Diesel Generator Fuel Transfer Pump (Div. 2) | Screened | >RLGM | Component screened by SRT judgment. |
| 2DO01T | Diesel Fuel Storage Tank (Div. 2) | Equipment Capacity | 0.45 | Component evaluated by HCLPF calculation 14Q4238-CAL-004. |
| 2DO05T | Diesel Generator Day Tank (Div. 2) | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-004. |
| 2E12-B001B | 2B RHR HEAT EXCHANGER | Anchorage / Equipment Capacity | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; evaluated by HCLPF calculation 14Q4238-CAL-004. |
| 2E12-F016B | B' RHR Outboard Primary Containment Spray Isolation Valve | Screened | >RLGM | Component screened by SRT analysis. |
| 2E12-F027B | "B" RHR Suppression Chamber Spray Valve | Block Wall Interaction | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component screened by SRT judgment. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--------------------------------------|------------------------|-----------|--|
| 2E12-F042B | "B" RHR (LPCI) RPV Injection Valve | Screened | >RLGM | Component screened by SRT analysis. |
| 2E31-N022A | Pressure Switch in Cabinet 2H22-P017 | Screened | >RLGM | Component is Rule Of Box to 2H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E31-N022B | Pressure Switch in Cabinet 2H22-P029 | Screened | >RLGM | Component is Rule Of Box to 2H22-P029. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E31-N022C | Pressure Switch in Cabinet 2H22-P017 | Screened | >RLGM | Component is Rule Of Box to 2H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E31-N022D | Pressure Switch in Cabinet 2H22-P029 | Screened | >RLGM | Component is Rule Of Box to 2H22-P029. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E51A-K015 | Relay in Cabinet 2H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K029 | Relay in Cabinet 2H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K032 | Relay in Cabinet 2H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K033 | Relay in Cabinet 2H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K039 | Relay in Cabinet 2H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K047 | Relay in Cabinet 2H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K048 | Relay in Cabinet 2H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K054 | Relay in Cabinet 2H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K055 | Relay in Cabinet 2H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K057 | Relay in Cabinet 2H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K058 | Relay in Cabinet 2H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K006 | Relay in Cabinet 2H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--|------------------------|-----------|--|
| 2E51A-K060 | Relay in Cabinet 2H13-P618 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P618. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K007 | Relay in Cabinet 2H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-K008 | Relay in Cabinet 2H13-P621 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2H13-P621. Relay capacity evaluated in 14Q4238-CAL-005. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2E51A-S003 | RCIC Steam Inlet MOV Hand switch @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51A-S004 | RCIC CST Suction Valve Hand switch @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51A-S005 | RCIC Injection Valve Hand switch @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51A-S008 | RCIC Turbine Cooling Water Supply Valve Hand switch @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51A-S009 | RCIC Min Flow Bypass to Suppression Pool Valve Hand switch @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51A-S010 | RCIC Suppression Pool Suction Valve Hand switch @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51A-S014 | RCIC Barometric Condenser Condensate Pump Hand switch @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51A-S015 | RCIC Barometric Condenser Vacuum Pump Hand switch @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51A-S026 | RCIC Turbine Trip & Throttle Valve Hand switch @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51-C001 | RCIC Pump | Block Wall Interaction | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component per se screened; anchorage is evaluated in 14Q4238-CAL-004. |
| 2E51-C002 | RCIC Turbine & Barometric Condenser | Block Wall Interaction | 0.37 | Component and anchorage screened by SRT judgment. Adjacent block wall evaluated in 14Q4238-CAL-003 |
| 2E51-C004 | RCIC Barometric Condenser Condensate Pump (DC) | Block Wall Interaction | 0.37 | Component is Rule Of Box to 2E51-C002. Host component screened by SRT judgment. Adjacent block wall evaluated in 14Q4238-CAL-003 |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--|------------------------|-----------|--|
| 2E51-C005 | RCIC Barometric Condenser Vacuum Pump (DC) | Block Wall Interaction | 0.37 | Component is Rule Of Box to 2E51-C002. Host component screened by SRT judgment. Adjacent block wall evaluated in 14Q4238-CAL-003 |
| 2E51-F010 | RCIC CST Suction Valve (DC) | Screened | >RLGM | Component screened by SRT judgment. |
| 2E51-F013 | RCIC Injection Valve (DC) | Screened | >RLGM | Component screened by SRT judgment. |
| 2E51-F019 | RCIC Min Flow Return to Suppression Pool Valve (DC) | Screened | >RLGM | Component screened by SRT analysis. |
| 2E51-F031 | RCIC Suppression Pool Suction Valve (DC) | Screened | >RLGM | Component screened by SRT judgment. |
| 2E51-F045 | RCIC Steam Inlet MOV (DC) | Screened | >RLGM | Component screened by SRT judgment. |
| 2E51-F046 | RCIC Lube Oil Cooling Flow Valve | Screened | >RLGM | Component screened by SRT analysis. |
| 2E51-F360 | RCIC Turbine Trip & Throttle Valve (DC) | Block Wall Interaction | 0.37 | Adjacent block wall evaluated in 14Q4238-CAL-003. Component screened by SRT judgment. |
| 2E51-F361 | RCIC Governor Valve (HO) | Block Wall Interaction | 0.37 | Component is Rule of Box to 2E51-C001. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per screened; anchorage is evaluated in 14Q4238-CAL-004. |
| 2E51-K601 | RCIC Square Root Converter @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51-N003 | RCIC Flow Transmitter @ Panel 2H22-P017 | Screened | >RLGM | Component is Rule Of Box to 2H22-P017. Host component screened by SRT analysis. |
| 2E51-N006 | Pressure Switch in Cabinet 2H22-P017 | Screened | >RLGM | Component is Rule Of Box to 2H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E51-N007 | RCIC Steam Supply Pressure Xmtr @ Panel 2H22-P017 | Screened | >RLGM | Component is Rule Of Box to 2H22-P017. Host component screened by SRT analysis. |
| 2E51-N009A | Pressure Switch in Cabinet 2H22-P017 | Screened | >RLGM | Component is Rule Of Box to 2H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E51-N009B | Pressure Switch in Cabinet 2H22-P017 | Screened | >RLGM | Component is Rule Of Box to 2H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E51-N012A | Pressure Switch in Cabinet 2H22-P017 | Screened | >RLGM | Component is Rule Of Box to 2H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E51-N012B | Pressure Switch in Cabinet 2H22-P029 | Screened | >RLGM | Component is Rule Of Box to 2H22-P029. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E51-N012C | Pressure Switch in Cabinet 2H22-P017 | Screened | >RLGM | Component is Rule Of Box to 2H22-P017. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E51-N012D | Pressure Switch in Cabinet 2H22-P029 | Screened | >RLGM | Component is Rule Of Box to 2H22-P029. Switch capacity evaluated in 14Q4238-CAL-005. Host component screened by SRT analysis. |
| 2E51-R600 | RCIC Pump Discharge Flow Controller | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2E51-R602 | RCIC Steam Supply Pressure Indicator @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--|------------------------|-----------|--|
| 2E51-R606 | RCIC Pump Discharge Flow Indicator @ Panel 2H13-P601 | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2EI-DC055 | 250VDC System Battery Volts Indicator @ Panel 2PM01J | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2EI-DC056 | 250VDC System Battery Charger Volts Indicator @ Panel 2PM01J | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2EI-DC057 | 125VDC Battery Voltage Indicator @ Panel 2PM01J (Div. 1) | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2EI-DC058 | 125VDC Battery Charger Volts Indicator @ Panel 2PM01J (Div. 1) | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2EI-DC059 | 125VDC Battery Voltage Indicator @ Panel 2PM01J (Div. 2) | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2EI-DC060 | 125VDC Battery Charger Volts Indicator @ Panel 2PM01J (Div. 2) | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2H13-P601 | Emerg. Core Cool System Panel | Equipment Capacity | 0.37 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade.. |
| 2H13-P612 | ASSY - PANEL, FEED WATER/RECIRCULATION | Equipment Capacity | 0.45 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2H13-P618 | ASSY - PANEL, DIV-2 RHR RELAY | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2H13-P621 | ASSY - PANEL, RI RELAY | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2H13-P628 | ADS SRV Panel | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2H13-P629 | ASSY - PANEL, DIV-1 LPCS/RHR RELAY | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2H13-P631 | ASSY - PANEL, AUTOMATIC DEPRESSION SYST B RELAY | Block Wall Interaction | >RLGM | Adjacent block wall evaluated in 14Q4238-CAL-006. Component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2H22-P017 | RCIC Transmitter Panel | Screened | >RLGM | Component screened by SRT analysis. |
| 2H22-P029 | Instrumentation Cabinets | Screened | >RLGM | Component screened by SRT analysis. |
| 2HS-DO01 | Diesel Generator Fuel Transfer Pump Hand switch | Equipment Capacity | 0.45 | Component is Rule Of Box to 2DG03J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2II-DC049 | 250VDC System Battery Amps Indicator @ Panel 2PM01J | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2II-DC050 | 250VDC System Battery Charger Amps Indicator @ Panel 2PM01J | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--|------------------------|-----------|---|
| 2II-DC051 | 125VDC Battery Amps Indicator @ Panel 2PM01J (Div. 1) | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2II-DC052 | 125VDC Battery Charger Amps Indicator @ Panel 2PM01J (Div. 1) | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2II-DC053 | 125VDC Battery Amps Indicator @ Panel 2PM01J (Div. 2) | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2II-DC054 | 125VDC Battery Charger Amps Indicator @ Panel 2PM01J (Div. 2) | Equipment Capacity | 0.37 | Component is Rule Of Box to 2PM01J. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2IN035 | VALVE, U2 SOUTH BANK IN REG | Screened | >RLGM | Component screened by SRT judgment. |
| 2IN038 | VALVE, NORTH BANK IN REG | Screened | >RLGM | Component screened by SRT judgment. |
| 2IN09MA | Nitrogen Bottle Bank (South Side) Gas Manifold System | Screened | >RLGM | Component screened by SRT judgment. |
| 2IN09MB | Nitrogen Bottle Bank (North Side) Gas Manifold System | Screened | >RLGM | Component screened by SRT judgment. |
| 2LI-CM192 | Wide Range Suppression Pool Water Level @2H13-P601 panel | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade.. |
| 2LT-CM030 | S-POOL WIDE RANGE LVL XMITTER | Screened | >RLGM | Component screened by SRT judgment. |
| 2PI-CM029 | Wide Range DW Pressure @2H13-P601 panel | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2PI-CM056 | S-POOL PRESS | Equipment Capacity | 0.37 | Component is Rule Of Box to 2H13-P601. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2PM01J | Battery Charger Panel | Equipment Capacity | 0.37 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2PM16J | ASSY - PANEL, P/C MONITOR/LEAK DETECTION | Equipment Capacity | 0.37 | Component per se screened; anchorage is evaluated in 14Q4238-CAL-002 and located >40' above grade. |
| 2PT-CM029 | D/W PRESS WIDE RANGE PRESS XMITTER | Screened | >RLGM | Component screened by SRT judgment. |
| 2PT-CM056 | S-POOL PRESS XMITTER | Screened | >RLGM | Component screened by SRT judgment. |
| 2TI-CM037 | Suppression Pool Water Temperature Indicator @ Panel 2C61-P001 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2C61-P001. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| 2TI-CM045 | Drywell Temperature Indicator @ Panel 2C61-P001 | Block Wall Interaction | >RLGM | Component is Rule Of Box to 2C61-P001. Adjacent block wall evaluated in 14Q4238-CAL-006. Host component per se screened; anchorage is evaluated in 14Q4238-CAL-002. |
| No EPN 1 | RCIC Lube Oil Cooler | Block Wall Interaction | 0.37 | Component is Rule of Box to 2E51-C001. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per screened; anchorage is evaluated in 14Q4238-CAL-004. |

| Equipment ID | Description | Failure Mode | HCLPF (g) | Basis |
|--------------|--|------------------------|-----------|--|
| No EPN 2 | RCIC Woodward Governor (on RCIC Turbine) | Block Wall Interaction | 0.37 | Component is Rule of Box to 2E51-C001. Adjacent block wall evaluated in 14Q4238-CAL-003. Host component per screened; anchorage is evaluated in 14Q4238-CAL-004. |