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December 18, 2014

AEP-NRC-2014-94
10 CFR 50.54(f)

Docket Nos.: 50-315
50-316

U.S. Nuclear Regulatory Commission
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11555 Rockville Pike,
Rockville, MD 20852

Donald C. Cook Nuclear Plant Units 1 and 2
Expedited Seismic Evaluation Process Report - Response to U. S. Nuclear Regulatory Commission 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. Letter from E. J. Leeds and M. R. Johnson, U. S. Nuclear Regulatory Commission (NRC), to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status, "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, Agencywide Document Access Management Systems (ADAMS) Accession Number ML12053A340.

2. Letter from T. R. Pietrangelo, Nuclear Energy Institute (NEI), to D. L. Skeen, NRC, "Proposed Path Forward for NTTF Recommendation 2.1: Seismic Reevaluations," dated April 9, 2013, ADAMS Accession No. ML13101A379.

3. Letter from J. P. Gebbie, Indiana Michigan Power Company, to the NRC, "Donald C. Cook Nuclear Plant (CNP) Unit 1 and Unit 2, 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," AEP-NRC-2013-41, dated April 25, 2013, ADAMS Accession No. ML13121A059.

4. Letter from E. J. Leeds, NRC, to J. E. Pollock, NEI, "Electric Power Research Institute Final Draft Report XXXXXX, '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," dated May 7, 2013, ADAMS Accession No. ML13106A331.

A010
NRR

On March 12, 2012, the U. S. Nuclear Regulatory Commission (NRC) issued Reference 1 to all power reactor licensees and holders of construction permits in active or deferred status. Reference 1, Enclosure 1, "Recommendation 2.1: Seismic," 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 requested NRC agreement to delay submittal of the CEUS Seismic Hazard Evaluation and Screening Reports so that an update to the Electric Power Research Institute ground motion attenuation model could be completed and used to develop the requested information. Reference 2 also outlined how a near-term Expedited Seismic Evaluation Process (ESEP), and long-term plant risk evaluations, would provide a complete response to Reference 1, Enclosure 1. By Reference 3, Indiana Michigan Power, licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, informed the NRC of its intent to follow the approach and schedule described in Reference 2. By Reference 4, the NRC agreed with the approach proposed in Reference 2, which included licensee submittal of an ESEP report no later than December 31, 2014. This letter provides the ESEP report for CNP Units 1 and 2.

Enclosure 1 to this letter provides an affirmation. Enclosure 2 provides the ESEP report for CNP Units 1 and 2. There are no new Regulatory Commitments identified in this letter. Should you have any questions, please contact Mr. Michael K. Scarpello, Regulatory Affairs Manager, at (269) 466-2649.

Sincerely,

Q. Shane Lies
Engineering Vice President, Indiana Michigan Power

JRW/amp

Enclosures:

1. Affirmation
2. 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

c: M. L. Chawla, NRC Washington, DC
J. T. King, MPSC
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C. D. Pederson, NRC Region III
A. J. Williamson, AEP Ft. Wayne, w/o enclosures

Enclosure 1 to AEP-NRC-2014-94

AFFIRMATION

I, Q. Shane Lies, being duly sworn, state that I am Engineering Vice President of Indiana Michigan Power (I&M), that I am authorized to sign and file this document with the U. S. Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

Indiana Michigan Power

Q. Shane Lies
Engineering Vice President, Indiana Michigan Power

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 18 DAY OF December, 2014

Notary Public

My Commission Expires 04-04-2018

DANIELLE BURGOYNE
Notary Public, State of Michigan
County of Berrien
My Commission Expires 04-04-2018
Acting in the County of Berrien

Enclosure 2 TO AEP-NRC-2014-94

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

Document Title:	13Q3208-RPT-005 – 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

Document Type:
Criteria ☐ Interface ☐ Report ☒ Specification ☐ Other ☐ Drawing ☐

Project Name: Seismic Hazard & ESEP Seismic Services for DC Cook Units 1 & 2
Job No.: 13Q3208
Client: American Electric Power

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

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Prepared by: G. G. Thomas, Jennifer Huang, Dan Lavarnway	Date: 12/10/14
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TABLE OF CONTENTS

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 [Ref. 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 (Code of Federal Regulations) 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 Donald C. Cook Nuclear Plant (CNP), Units 1 & 2. The intent of the ESEP is to perform an interim action in response to the NRC's 50.54(f) letter [Ref. 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 Electric Power Research Institute (EPRI) 3002000704, Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic [Ref. 2].

The objective of this report is to provide summary information describing the ESEP evaluations and results. The level of detail provided in the 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 CNP Diverse and Flexible Coping Strategies (FLEX) response strategies for Reactor Core Cooling and Heat Removal, Reactor Inventory Control/ Long-term Subcriticality and Containment Function are similar for both Units. The following discussion is a summary of CNP primary strategies to address a Beyond-Design-Basis Seismic Event (BDBSE). This summary is derived from the CNP Overall Integrated Plan (OIP) and updates in Response to the March 12, 2012, Commission Order EA-12-049 [Ref. 3].

Phase 1 FLEX Strategies

Reactor Core Cooling and Heat Removal

Steam Generator Cooling, for Reactor Coolant System (RCS)/Core Heat Removal is initially provided by operation of the Turbine Driven Auxiliary Feedwater (TDAFW) Pump taking suction from the Condensate Storage Tank (CST). Site specific analysis [Ref. 29] has been performed to demonstrate adequate CST volume for feeding each Unit's TDAFW pumps from a single CST. This analysis demonstrates sufficient inventory is available to maintain secondary heat sink for 12 hours post Extended Loss of AC Power (ELAP) including cool down of each Unit by depressurizing Steam Generators (SG) in accordance with Emergency Operating Procedures (EOPs).

An alternate cooling source will need to be aligned to maintain secondary inventory make up when the CST is depleted or becomes unavailable. Lake water make up to the steam generators uses a FLEX lift pump to deliver lake water from the Circulating Water Intake Forebay to the TDAFW pump suction FLEX connection.

RCS Boration/Inventory Control

No pumped RCS Boration or RCS make up is required in Phase 1. Depending upon Reactor Coolant Pump (RCP) seal leakage and related RCS depressurization, some Safety Injection Accumulator make up to the RCS may occur based upon the results of CNP analyses. Westinghouse Shield® Passive Thermal Shutdown RCP seals limiting RCS leakage are credited for FLEX implementation.

Containment

Site specific analytical results [Ref. 29] determined the FLEX Containment Temperature and Pressure control actions. In the MODE 1-4 response, Containment pressure does not reach the maximum design pressure limit until after 70 hours.

Power

Each Unit's Control Room Instrument Distribution (CRID) and Critical Control Room Power (CCRP) inverters maintain control room instrumentation and control with power supplied from the Train A&B Station batteries. Secondary inventory make up is controlled using the TDAFW pump with local manual control of the TDAFW pump and hand-wheel operation of key motor operated valves. A Direct Current (DC) load shed will be performed to reduce Train A&B Station battery discharge rate within the first hour to ensure 12 hours are available to deploy FLEX electrical generators. A plant specific DC load shedding analysis [Ref. 29] demonstrates the 12 hour coping capability for these batteries.

Phase 2 FLEX Strategies

Reactor Core Cooling and Heat Removal

A FLEX Lift pump is expected to be deployed in Phase 2 as an Alternate Cooling Source (ACS) to provide secondary inventory to maintain core cooling with the Steam Generators (SG).

The FLEX lift pump will draw water from the Circulating Water Intake Forebay, delivering flow to the TDAFW pump suction and the Spent Fuel Pool (SFP). The deployment time is within 12 hours. This is based upon the CST capacity determined by site specific analyses [Ref. 29].

Four Steam Generators will be used to maintain symmetric RCS cool down for the first 24 hours. Steam Generator Power Operated Relief Valves operated from local control stations or local manual operation that is the credited strategy, are used for control of Steam Generator (SG) pressure and RCS cool down rate.

This accounts for the initiation of RCS Boration at 16 hours and provides acceptable Boron mixing in the RCS, and the limiting RCS natural circulation flow rates. The RCS will be fully Borated by twenty four (24) hours after the event. At this 24 hour mark SG cooling may be reduced to two of four Steam Generators.

RCS Boration/Inventory Control

In MODEs 1-4, the RCS Boration and make up flow path uses a portable FLEX Boric Acid (BA) pump. The FLEX BA pump takes suction via gravity drain using a hose connected to the Boric Acid Storage Tank (BAST) outlet. The FLEX BA pump discharges to the RCS through the Charging header piping connection, that was modified by installing a high pressure hose connection for CNP Unit 1 and will be modified in the future for CNP Unit 2. The FLEX BA pump provides sufficient pressure and flow to fully borate one unit using a single BAST.

Containment

Site specific evaluation [Ref. 29] determined no Phase 2 FLEX Containment Temperature and Pressure control actions or equipment operation are required for the MODE 1-4 Containment response. After 24 hours containment pressure will exceed the value for Adverse Containment Conditions as defined by Emergency Operating Procedures. Operators will then use more conservative values for actions based upon Steam Generator and Pressurizer indicated level. Per Reference 29, both CNP Units are Ice Condenser Containments, requiring Phase 2 FLEX Generators to power one train of containment hydrogen igniters in accordance with the Regulatory criterion.

Spent Fuel Control

No Spent Fuel Pool (SFP) inventory make up is required until after 24 hours. SFP inventory makeup is available as needed from the FLEX Lift pump deployed in Phase 2 to supply the TDAFW Pump.

Power

FLEX generators, 600vac (volt alternating current), 500kW (Kilo-watt), will be deployed from the FLEX storage building. FLEX power will be supplied to select loads through 600vac Buses to allow restoration of loads such as battery chargers, a Boric Acid Transfer pump, the Middle Boric Acid Evaporator feed pump, Train B Hydrogen Igniters, and Train A Reactor Vessel Level Indication System (RVLIS).

Phase 3 FLEX Strategies

Reactor Core Cooling and Heat Removal

Phase 3 equipment includes two, 1.1 MWe, 4160V gas turbine generators supplied from the National SAFER Response Center (NSRC) for each unit. These generators will repower 4kV busses, which allows repowering Train B 4kV safety related motors, 600vac Busses, and related 120vac lighting and low voltage electrical distribution circuits. Train B was selected because it provides the ideal mix of 4kV safety related pumps such as Component Cooling Water (CCW), Residual Heat Removal (RHR), Motor Driven Auxiliary Feedwater (MDAFW) and Essential Service Water (ESW) (if access to the Ultimate Heat Sink (UHS) is available) while restoring 600vac busses.

Train B power restoration allows starting the West CCW pump, West RHR pump, Train B control room ventilation and facilitates establishing shutdown cooling in conjunction with the NSRC supplied large volume raw water pump. Using a FLEX connection point, this large volume FLEX pump will supply Train B of the ESW system, from the Circulating Water Forebay,

to support the RHR and CCW systems for shutdown cooling alignment if the UHS is unavailable.

RCS Boration/Inventory Control

The RCS Boration and make up flow path continues to use the portable FLEX Boric Acid (BA) pump as described in Phase 2.

Containment

Per Reference 29 Phase 3 Containment cooling and depressurization will be accomplished by the operation of one Containment Hydrogen Skimmer Fan. Operation of this Fan results in flow through the Ice Condenser; cooling and depressurizing the Containment. Operation of this Fan will reduce Containment Pressure and Temperatures to normal values within 2-3 hours after starting the Fan.

Spent Fuel Control

SFP cooling is maintained during FLEX response by providing SFP inventory makeup from the Circulating Water Forebay using the FLEX Lift pump. Moisture caused by evaporation or boiling will be removed from the Auxiliary Building by natural draft.

Power

Two 1 MW 4kV generators from the NSRC per Unit will be ganged together using NSRC output bus and paralleling equipment. NSRC 4 kV power to Bus 1A (2A) is connected by relocating the Reserve Feed 4kV Bus infeed circuit breaker and FLEX connections at the load side of 4kV circuit breakers. NSRC 4kV power is sufficient to restore the Train B 4kV vital pump bus and 600Vac busses. 4kV power restoration in Phase 3 facilitates re-energizing loads to support the strategies summarized herein.

3.0 Equipment Selection Process and ESEL

The selection of equipment for the Expedited Seismic Equipment List (ESEL) followed the guidelines of EPRI 3002000704 [Ref. 2] Seismic Evaluation Guidance and NEI 12-06 FLEX Implementation Guidance [Ref. 24]. The ESEL for Unit 1 & 2 is presented in Attachment 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 External Event (BDBEE), as outlined in the CNP Overall Integrated Plan (OIP) and updates in Response to the March 12, 2012, Commission Order EA-12-049 [Ref. 3]. The OIP provides the CNP FLEX mitigation strategy and serves as the basis for equipment selected for the ESEP.

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 CNP OIP and updates [Ref. 3]. FLEX recovery actions are excluded from the ESEP scope per EPRI 3002000704 [Ref. 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 and subcriticality, and containment integrity functions. Portable and pre-staged FLEX equipment (not permanently installed) are excluded from the ESEL per EPRI 3002000704 [Ref. 2].

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

1. The scope of components is limited to that required to accomplish the core cooling and containment safety functions identified in Table 3-2 of EPRI 3002000704 [Ref. 2]. 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 CNP OIP [Ref. 3].
2. The scope of components on the ESEL was limited to installed plant equipment, and FLEX connections necessary to implement the CNP OIP [Ref. 3] 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. These are the "Primary" path for CNP.
4. The "Primary" FLEX success path is to be specified. Selection of the "Back-up/Alternate" FLEX success path must be justified. CNP did not use a "Back-up/Alternate" FLEX success path
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 [Ref. 2] guidance are:
   - Structures (e.g. containment, auxiliary building, etc.)
   - Piping, cabling, conduit, HVAC, and their supports
   - Manual valves and rupture disks
   - Power-operated valves not required to change state as part of the FLEX mitigation strategies
   - Nuclear steam supply system (NSSS) components (e.g. reactor pressure vessel and internals, reactor coolant pumps and seals, etc.)
7. For cases in which neither train was specified as a primary or back-up strategy, then only one train component (generally 'B' train for CNP) is included in the ESEL

Permanent plant equipment required for implementation of the FLEX Strategy was identified by reviewing the FLEX Strategy and associated cooling flow path piping and instrumentation diagrams (P&ID), instrument elementary diagrams, and electrical distribution one-line diagrams. The approach taken in compiling the ESEL was to assume there were no random equipment failures and identify a single success path for each element of the FLEX Strategy. Note, the EPRI 3002000704 [Ref. 2] Seismic Evaluation Guidance states that only one success path is required. Also, NEI 12-06 FLEX Implementation Guidance [Ref. 24] does not require postulating single or multiple random failures during or following an Extended Loss of all Alternating Current (AC) Power and Loss of the Ultimate Heat Sink (ELAP/LUHS) event[1].

Following Section 3.2 of the EPRI 3002000704 [Ref. 2] Seismic Evaluation Guidance the following equipment categories were excluded from consideration:

- Structures
- Distributed systems (piping, cabling, conduit, cable trays, Heating, Ventilation and Air Conditioning (HVAC))
- Nuclear Steam Supply System (NSSS) components

The corresponding components listed in the ESEL have been further screened utilizing the Evaluation Guidance to exclude components having the following criteria:

- Non-power operated valves (manual valves, check valves, rupture disks)
- Power operated valves not required to change state for any FLEX strategy
- Sub-components mounted within equipment already included on the list[2]

[1] The FLEX Integrated Plan [Ref. 29] also assumed no single failure of structures, systems, or components (SSC), in accordance with the Implementation Guidance.

[2] This item refers to the "Rule-of-Box" (ROB). When equipment is screened using the EPRI NP-6041-SL [Ref. 7] guidance, all of the components mounted on or in equipment of a particular equipment class are considered to be part of that equipment and do not have to be evaluated separately. Relays and other contact devices vulnerable to seismically induced chatter are an exception to this rule and should be separately identified and evaluated for seismic adequacy using the ESEP evaluation guidance.

Additional screening criteria were applied to exclude components from the ESEL that met the following criteria:

- In-line pipe-supported components (without separate mounting)
- Pumps and small heat exchangers within piping pressure boundaries but not in the flow path
- Components expected to operate during the initial reactor transient (as described in NEI 12-06 section 3.2.1.4 [Ref. 24])

The Equipment Selection and ESEL Development is documented in S&A Report 13Q3208-RPT-001, [Ref. 25].

3.1.1 ESEL Development

The ESEL was developed by reviewing the CNP FLEX Integration Plan [Ref. 29] to determine the major 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 flowpaths to be used in the FLEX strategies and to identify specific components in the flowpaths needed to support implementation of the FLEX strategies. Boundaries were established at an electrical or mechanical isolation device (e.g., isolation amplifier, valve, etc.) in branch circuits / branch lines off the defined strategy electrical or fluid flowpath. 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 drawings, system descriptions, design basis documents, etc., as necessary.

The flow paths credited for the CNP ESEP are shown in Table 3-1.

Table 0-1: Flow Paths Credited for ESEP

Flow Path	P&IDs/Reference Drawings	
	Unit 1	Unit 2
Phase 1 and Phase 2 Reactor Coolant System (RCS) Heat Removal: Main Steam Power Operated Relief Valves discharge steam from the Steam Generators to the atmosphere. Feedwater from the Turbine Driven Auxiliary Feedwater Pump with suction from the Condensate Storage Tank or portable FLEX pump from the Ultimate Heat Sink (UHS).	OP-1-5105D [26.1] OP-1-5105E [26.2] OP-1-5106A [26.3] OP-1-5113 [26.4] OP-1-5113A [26.5]	OP-2-5105D [26.19] OP-2-5105E [26.20] OP-2-5106A [26.21] OP-2-5113 [26.22] OP-2-5113A [26.23]
Phase 3 Reactor Coolant System (RCS) Heat Removal: Mode 4 Train B Residual Heat Removal (RHR) system, using the Train B Component Cooling (CCW) System, and Train B Essential Service Water (ESW) system supplied by a portable FLEX pump from the UHS.	OP-1-5113 [26.4] OP-1-5113A [26.5] OP-1-5143 [26.6] OP-1-5135 [26.7] OP-1-5135A [26.8]	OP-2-5113 [26.22] OP-2-5113A [26.23] OP-2-5143 [26.24] OP-2-5135 [26.25] OP-2-5135A [26.26]
Phase 1 Reactor Coolant Make Up and Boration Control: Passive injection from the Safety Injection Accumulators.	OP-1-5143A [26.9]	OP-2-5143A [26.27]
Phase 2 and Phase 3 Reactor Coolant Make Up and Boration Control: A portable FLEX pump taking suction from the Boric Acid Storage Tank (BAST) FLEX connection to the Reciprocating Charging Pump discharge piping FLEX connection; to the RCS via the Boron Injection Tank.	OP-12-5131 [26.10] OP-1-5129 [26.11] OP-1-5142 [26.12]	OP-12-5131 [26.10] OP-2-5129 [26.28] OP-2-5142 [26.29]
RCS Pressure Control: RCS Pressurizer Power Operated Relief Valves.	OP-1-5128 [26.13] OP-1-5128A [26.14] OP-1-5120D [26.15]	OP-2-5128 [26.30] OP-2-5128A [26.31] OP-2-5120D [26.32]
Containment: Analytical results indicate Phase 1 and Phase 2 FLEX actions are not required. Phase 3 uses a Fan to draw air through the Ice Condenser to cool Containment.	OP-1-12032[26.36]	OP-2-12032 [26.37]
Fuel Oil: From the Diesel Oil Storage Tank via a portable FLEX pump to provide fuel for FLEX equipment.	OP-1-5151C [26.16]	OP-2-5151A [26.33]

Flow Path	P&IDs/Reference Drawings	
	Unit 1	Unit 2
Phase 1 Main Control Room (MCR) and Battery Room Ventilation: Open doors and use portable FLEX fans.	None	None
Phase 2 Main Control Room and Battery Room Ventilation: Maintain MCR ventilation with open doors and portable FLEX fans. Battery Room ventilation is powered by portable FLEX Generators along with Station Battery Chargers.	OP-1-5148C [26.17]	OP-2-5148C [26.34]
Phase 3 Main Control Room and Battery Room Ventilation: Restore Train B of MCR ventilation powered by NSRC portable FLEX Generators. Battery Room ventilation is also powered by these portable generators.	OP-1-5148C [26.17] OP-1-5149 [26.18] OP-1-5113 [26.4]	OP-2-5148C [26.34] OP-2-5149 [26.35] OP-2-5113 [26.22]

Each of the following flow paths were analyzed, and all mechanical equipment necessary to establish these flow paths were considered for inclusion in the ESEL:

- Main Steam to the Turbine Driven Auxiliary Feedwater Pump
- Auxiliary Feedwater (AFW) to the Steam Generators
- Reactor Coolant Make Up
- Residual Heat Removal
- Main Control Room Ventilation
- Battery Room Ventilation
- Instrument Air

Implementing procedures to establish these flow paths were examined to identify valves that will be manipulated manually using the local valve operator hand wheel. These valves were excluded from the electrical power and control identification activities mentioned in the next two sections.

3.1.2 Power Operated Valves

Page 3-3 of EPRI 3002000704 [Ref. 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. Reactor Core Isolation Cooling (RCIC)/AFW trips)." To address this concern, the following guidance is applied for the CNP Unit 1 and CNP Unit 2 ESEL for functional failure modes associated with power operated valves:

- Power operated valves that remain energized during the Extended Loss of all AC Power (ELAP) events (such as DC powered 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 [Ref. 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; however, the cabinets are included on the ESEL to ensure that industry knowledge of panel/anchorage failure vulnerabilities is addressed.

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).

The FLEX Integrated Plan [Ref. 29] was reviewed and key plant parameters were identified. Instrumentation required to indicate the following parameters was considered for inclusion in the ESEL:

- Steam Generator Pressure and Level Indications
- Reactor Coolant System Pressure and Temperature Indications
- Reactor Vessel Level Indication (Utilizing the Reactor Vessel Level Instrumentation System)
- Pressurizer Level Indication
- Neutron Flux Indication
- Core Exit Temperature Indication
- Auxiliary Feedwater Flow Indication

- Safety Injection Flow Indication
- Containment Pressure Indication
- Condensate Storage Tank Level Indication
- Boric Acid Storage Tank Level and Temperature Indication

To compile the instrumentation included in the ESEL, instrument loop identifiers for these parameters were taken, where possible, from the Updated Final Safety Analysis Report (UFSAR) Table 7.8-1, *Variables Provided the Operator for Manual Functions During and Following an Accident* [Ref. 21]. Where both wide and narrow range instruments were indicated for a given parameter on UFSAR Table 7.8-1, the wide-range instrument was chosen. P&IDs were consulted for parameters not included in UFSAR Table 7.8-1.

3.1.6 Electrical Distribution

The electrical distribution and motor control centers (MCCs) necessary to provide power to the instrumentation, pumps, valves, or any other electrically powered permanent plant equipment identified for ESEP were included in the ESEL. This includes vital instrument power from the station batteries through the inverters to the vital bus panels, instrument racks, and Main Control Room (MCR) panels. Distribution paths were identified from intended FLEX generator connection points to their intended loads.

3.1.7 Control Equipment

The control equipment necessary to operate the pumps, valves, or any other electrically powered permanent plant equipment identified for ESEP was considered for inclusion in the ESEL. Relays and other sensitive contact devices subject to seismically induced chatter that may lead to a circuit seal-in or lockout were also considered for inclusion on the ESEL. Power sources for the required control circuits were traced and any power distribution component necessary for the control circuits (and not already identified) were added to the ESEL.

As mentioned in Section 3.1.2, controls for local manually operated valves were not considered. The list of valves crediting manual operation includes the Turbine-Driven Auxiliary Feedwater Pump (TDAFP) Trip and Throttle Valve. None of the relays associated with the TDAFP trip function were included on the ESEL because if an event causes an actuation and trips the TDAFP, operators will reset the TDAFP manually according to the Emergency Operating Procedures described in Stevenson & Associates (S&A) Report 13Q3208-RPT-001 [Ref. 25]. It is noted that all other relays screened out of consideration for ESEP and thus the ESEL contains no relays.

3.1.8 FLEX Connections (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 CNP OIP [Ref. 3] 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 in the case of CNP to support a single Primary FLEX success path. It is noted that these connections have been installed for CNP Unit 1 and are planned to be installed for CNP Unit 2 in the spring 2015 outage.

Item 6 in Section 3 above goes on to explain that "Piping, cabling, conduit, HVAC, and their supports" are excluded from the ESEL scope in accordance with EPRI 3002000704 [Ref. 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 active valves in FLEX Phase 2 and Phase 3 connection flow path are included in the ESEL.

The flow paths described in Section 3.1.1 of this report and included with marked up Piping and Instrumentation Drawings (P&IDs) in S&A Report 13Q3208-RPT-001 [Ref. 25] were configured for the FLEX connections consistent with the August 2014 FLEX strategy [Ref. 29]. The scope of equipment in the ESEL includes FLEX connections necessary to implement the CNP OIP [Ref. 3] as described in Section 2. The scope of components assumed the credited FLEX connection modifications are implemented, and are limited to those required to support a single Primary FLEX success path. It is also noted there are no plans to have permanently installed FLEX equipment for CNP Unit 1 or CNP Unit 2.

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

All equipment used for FLEX implementation on the CNP ESEL are the primary path. The complete ESELs for CNP Unit 1 and CNP Unit 2 are presented in Attachments A and B, respectively.

4.0 Ground Motion Response Spectrum (GMRS)

4.1 Plot of GMRS Submitted by the Licensee

As documented in Stevenson & Associates (S&A) Report 13Q3208-RPT-003 [Ref. 4] (transmitted by letter from Q. S. Lies, I&M, to NRC, "Donald C. Cook Nuclear Plant Units 1 and 2, Seismic Hazard and Screening 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," dated March 27, 2014) [Ref. 11] the SSE Control Point for Containment is at an elevation of 587.4 ft. which is used for comparison to the Control Point GMRS.

The GMRS at 5% equipment damping, taken from S&A Report 13Q3208-RPT-003 [Ref. 4], is shown in Table 4-1 and Figure 4-1.

Table 4-1 CNP GMRS

Frequency (Hz)	GMRS (g)	Frequency (Hz)	GMRS (g)
100	0.248	3.5	0.321
90	0.251	3	0.288
80	0.254	2.5	0.240
70	0.261	2	0.210
60	0.273	1.5	0.167
50	0.302	1.25	0.133
40	0.348	1	0.102
35	0.376	0.9	0.0932
30	0.405	0.8	0.0822
25	0.454	0.7	0.0722
20	0.461	0.6	0.0639
15	0.525	0.5	0.0563
12.5	0.496	0.4	0.0451
10	0.464	0.35	0.0394
9	0.466	0.3	0.0338
8	0.454	0.25	0.0282
7	0.426	0.2	0.0225
6	0.415	0.15	0.0169
5	0.421	0.125	0.0141
4	0.361	0.1	0.0113

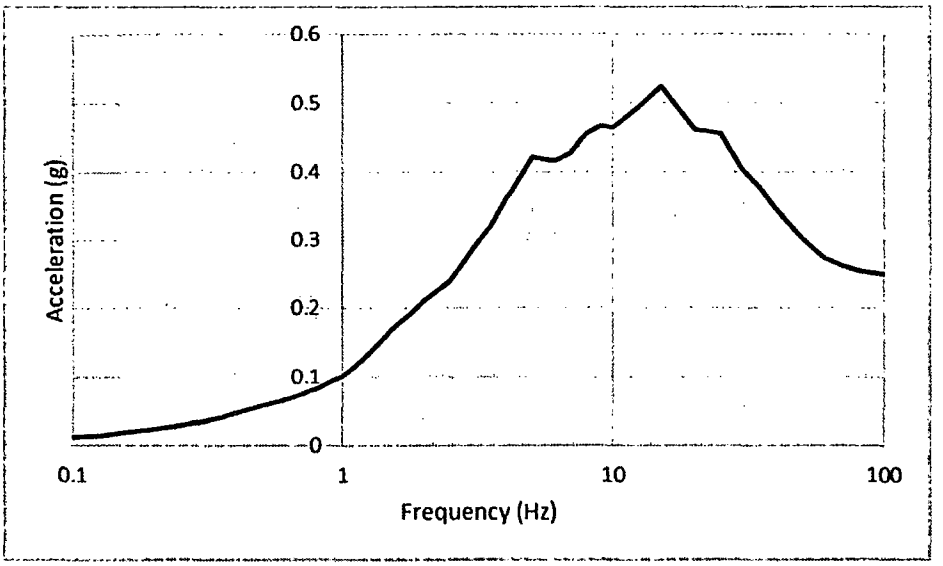

Figure 4-1 CNP GMRS

4.2 Comparison to SSE

As documented in S&A Calculation 13Q3208-CAL-002 [Ref. 23], the GMRS exceeds the SSE in the 3.5 Hz. to 10 Hz range for 5% equipment damping. A comparison of the GMRS to the SSE between 1-10 Hz is shown in Table 4-2 and Figure 4-2.

Table 0-2: CNP GMRS and SSE between 1-10Hz

Frequency (Hz)	SSE (g)	GMRS (g)
10	0.24	0.464
9	0.252	0.466
8	0.264	0.454
7	0.276	0.426
6	0.305	0.415
5	0.315	0.421
4	0.32	0.361
3.5	0.32	0.321
3	0.304	0.288
2.5	0.287	0.24
2	0.27	0.21
1.5	0.221	0.167
1.25	0.195	0.133
1	0.167	0.102

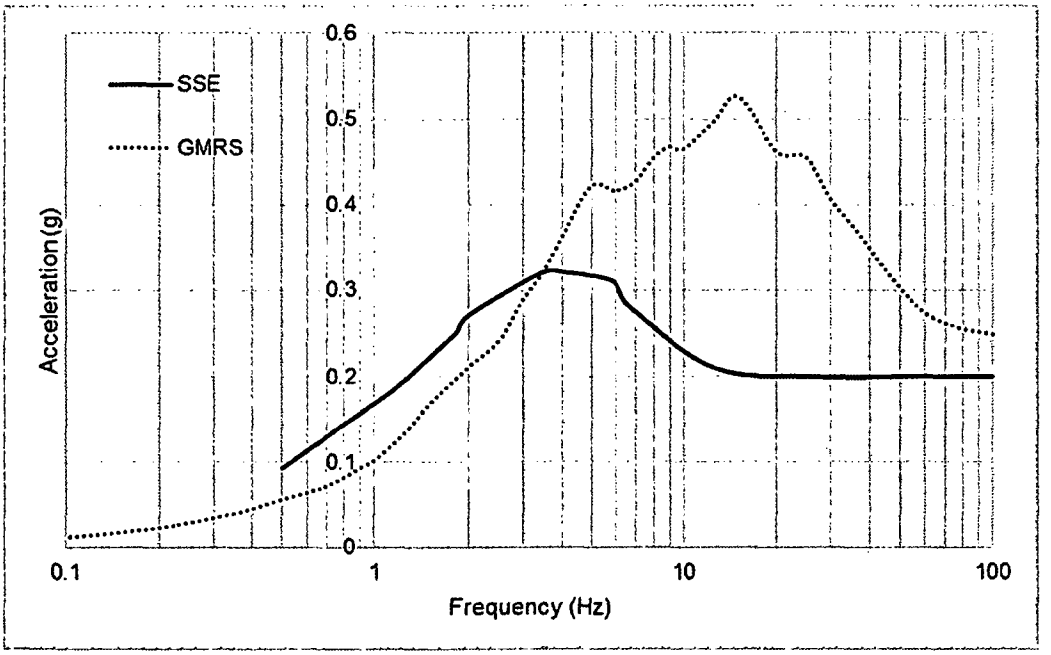

Figure 4-2 GMRS / SSE Comparison

5.0 Review Level Ground Motion (RLGM)

5.1 Description of RLGM selected

The RLGM for CNP was determined in accordance with Section 4 of EPRI 3002000704 [Ref. 2] by linearly scaling the CNP SSE by the maximum GMRS/SSE ratio (SF) between the 1 and 10 Hz range. The RLGM for CNP is also documented in S&A Calculation 13Q3208-CAL-002 [Ref. 23]. The results of this calculation are shown in Table 5-1.

Table 0-2: CNP Maximum GMRS/SSE Ratio (SF)

Frequency (Hz)	Unscaled GMRS (g)	SSE (g)	GMRS/SSE
10	0.464	0.24	1.933
9	0.466	0.252	1.849
8	0.454	0.264	1.720
7	0.426	0.276	1.543
6	0.415	0.305	1.361
5	0.421	0.315	1.337
4	0.361	0.32	1.128
3.5	0.321	0.32	1.003
3	0.288	0.304	0.947
2.5	0.24	0.287	0.836
2	0.21	0.27	0.778
1.5	0.167	0.221	0.756
1.25	0.133	0.195	0.682
1	0.102	0.167	0.611

As shown above, the maximum GMRS/SSE ratio occurs at 10 Hz and equals 1.933.

The resulting 5% damped RLGM, based on scaling the horizontal SSE by the SF of 1.933, is shown in Table 5-2 and Figure 5-1. Note that the RLGM Peak Ground Acceleration (PGA) is 0.387g.

Table 0-3: CNP RLGM			
Freq. (Hz)	SA (g)	Freq. (Hz)	SA (g)
0.5	0.180	4.17	0.619
0.77	0.271	5.88	0.599
1.11	0.348	6.67	0.541
1.43	0.416	12.5	0.406
1.82	0.483	25	0.387
2	0.522	50	0.387
3.45	0.619	100	0.387

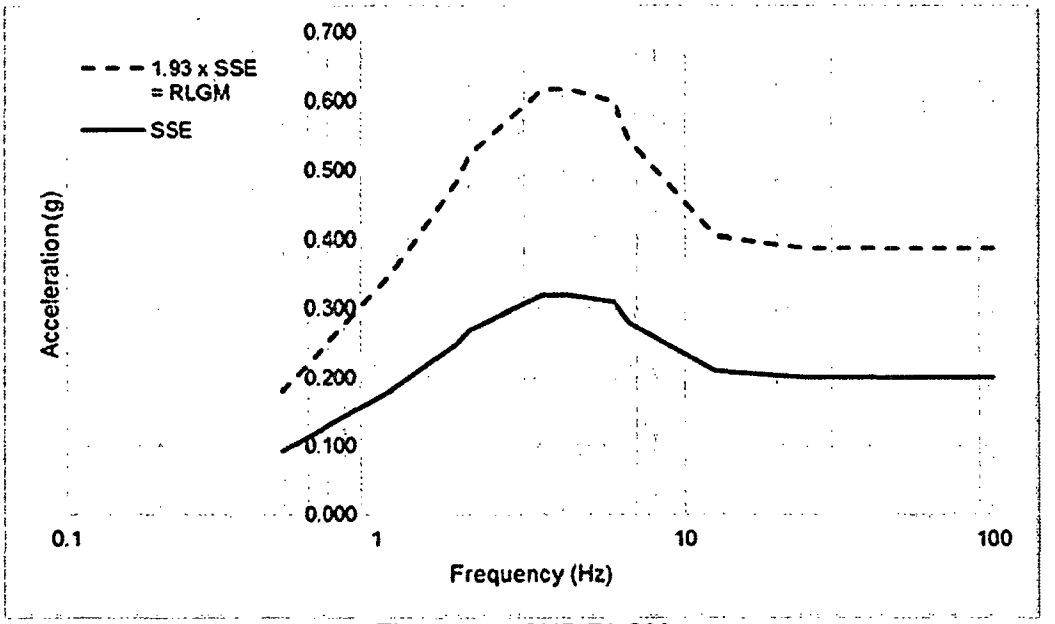

Figure 0-1: CNP RLGM

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 the CNP Design Basis SSE (referred to as the Design Basis Earthquake (DBE) in the CNP UFSAR [Ref. 21]) [Refs. 17.1, 17.2, 17.3 and 17.4] by the maximum SF of 1.933 from Table 5-1. Existing ISRS were the same as those used for the Unresolved Safety Issue (USI) A-46 program. Scaled ISRS are calculated for all buildings and elevations where ESEL items are located at CNP. The scaled ISRS for CNP are documented in S&A Calculation 13Q3208-CAL-002 [Ref. 23]. These scaled ISRS were used as the basis for screening and for the High Confidence Low Probability of Failure (HCLPF) calculations 13Q3208-CAL-004 [10.1], 13Q3208-CAL-005 [10.2], and 13Q3208-CAL-006 [10.3].

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 highest peak ground acceleration (PGA) for which there is a high confidence of a low probability of failure (HCLPF). The PGA is associated with a particular spectral shape, in this case the 5% damped RLGM spectral shape. The calculated HCLPF capacity must be equal to or greater than the RLGM PGA (0.387g from Table 5-2 and Figure 5-1). The criteria for seismic capacity determination are given in Section 5 of EPRI 3002000704 [Ref. 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-SL [Ref. 7].
2. Probabilistic approach using the fragility analysis methodology of EPRI TR-103959 [Ref. 8].

The deterministic approach using the CDFM methodology of EPRI NP-6041-SL [Ref. 7] was used for the CNP to determine HCLPF capacities.

6.1 Summary of Methodologies Used

CNP performed a seismic probabilistic risk assessment (SPRA) for their Individual Plant Examination for External Events (IPEEE) in 1992. The SPRA is documented in the CNP IPEEE report [Ref. 9] and consisted of screening walkdowns and fragility calculations for anchorage, buildings and tanks. The screening walkdowns used a similar methodology that is included for a Seismic Margin Assessment (SMA) that uses Table 2-4 of EPRI NP-6041-SL [Ref. 7] for screening. The walkdowns were conducted by trained engineers that successfully completed the Seismic Qualification Utility Group (SQUG) Walkdown Screening and Seismic Evaluation Training Course. The walkdown results were documented on Screening Evaluation Work Sheets (SEWS). Anchorage capacity calculations partially used the CDFM criteria from EPRI NP-6041-SL [Ref. 7] or the fragility methodology in Reference 8.

For the ESEP, CNP applied the SMA methodology of EPRI NP-6041-SL [Ref. 7] to all accessible items on the ESEL. The performed screening used Table 2-4 from EPRI NP-6041-SL [Ref. 7]. 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 in SEWS consistent with EPRI NP-6041-SL [Ref. 7]. Anchorage capacity calculations use the CDFM criteria established within EPRI NP-6041-SL [Ref. 7] with CNP 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. It is noted that CNP did not use the results from the IPEEE [Ref. 9] directly, but did use the documentation (SEWS forms) that supported

the USI A-46 [Ref. 16] for screening. The walkdown and screening for the ESEP is documented in S&A Report 13Q3208-RPT-004 [Ref. 20].

6.2 HCLPF Screening Process

The peak spectral acceleration of the RLGM for CNP equals 0.62g. Screening lanes 1 and 2 in Table 2-4 of EPRI NP-6041-SL [Ref. 7] are bounded by peak spectral accelerations of 0.8g and 1.2g, respectively. Both lane limits exceed the RLGM peak spectral acceleration. ESEL components were screened to lane 1 or 2 of Table 2-4 in EPRI NP-6041-SL [Ref. 7]. When lane 2 was used it is documented on the screening summary tabulation contained in Attachment C and D of this report.

The CNP Unit 1 and CNP Unit 2 ESEL contain 240 items and 237 items, respectively [Ref. 25]. Of these, there are 33 valves for Unit 1 and 33 valves for Unit 2 (including power-operated, air-operated, and relief valves). In accordance with Table 2-4 of EPRI NP-6041-SL [Ref. 7], active valves may be assigned a functional capacity of 0.8g to 1.2g (relative to the spectral peaks for Screening Lane 1 and 2) only requiring a review of valves with large extended operators on small diameter piping. Note that anchorage is not a failure mode. Valves on the ESEL may be screened out, subject to the caveat regarding large extended operators on small diameter piping.

The non-valve components in the ESEL can generally be screened using results consistent with the SMA methodology. It is noted that the screening caveats for screening lane 2 in Table 2-4 of EPRI NP-6041-SL [Ref. 7] conform to those used in the USI A-46 [Ref. 16] for CNP. If the evaluation of the equipment item on the ESEL using the SMA methodology shows that the component met the EPRI NP-6041-SL [Ref. 7] screening caveats and the CDFM capacity exceeded the Review Level Earthquake (RLE) demand, which it does for CNP, the component can be screened out from the ESEP capacity determination. This was done for items where equipment item specific SEWS were available from the USI A-46 [Ref. 16] evaluation. The engineers performing the walkdowns checked for changes made to the equipment since the USI A-46 work was completed that could potentially effect screening. In addition non-valve components on the ESEL without USI A-46 SEWS were evaluated to the EPRI NP-6041-SL Table 2-4 [Ref. 7] screening caveats, as applicable.

6.3 Seismic Walkdown Approach

6.3.1 Walkdown approach

Walkdowns for CNP were performed in accordance with the criteria provided in Section 5 of EPRI 3002000704 [Ref. 2], which refers to EPRI NP-6041-SL [Ref. 7] for the Seismic Margin Assessment process. Pages 2-26 through 2-30 of EPRI NP-6041-SL [Ref. 7] 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[3]] 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 CNP walkdowns included, as a minimum, a 100% walk-by of all items on the CNP ESEL except as noted in Section 7.0. Previous walkdown information that was relied upon as the basis for the SRT judgment in excluding an item walkdown is documented in Section 6.3.2. It is noted that the walkdown and screening of an individual equipment item was frozen at the time of the walkdown date for that equipment. Walkdowns were conducted at various times between March 2014 and November 2014. The screening status of the equipment included in this report reflects the configuration at the time the item was walked down and after all evaluations were performed. The walkdown and screening information for the ESEP is documented in S&A Report 13Q3208-RPT-004 [Ref. 20].

6.3.2 Application of Previous Walkdown Information

The Augmented Approach Guidance for the NTTF 2.1 Seismic walkdowns [Ref. 2] references EPRI NP-6041-SL for Screening [Ref. 7]. The Reference 2 augmented approach allows use of walkdown results from recent walkdowns that include the recently completed NTTF 2.3 walkdowns [Ref. 18]. EPRI NP-6041-SL states that the walkdown team should attempt a 100% walk-by of all items on the listing. It also states that reasons for this not being possible are that some items may be inaccessible due to the equipment being in a high radiation area or cannot be looked at (like buried tanks).

The following list of items were inaccessible but screened in accordance with EPRI NP-6041-SL, based on documentation and similarity to items that were included in the walkdowns. Previous seismic walkdowns were used to support the ESEP seismic evaluations. Some of the components on the ESEL were included in the NTTF 2.3 seismic walkdowns [Ref. 18]. The basis for screening is also included.

[3] EPRI 3002000704 [Ref. 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 [Ref. 14].

The following items on the Unit 1 ESEL were screened in this manner:

Item 11, 12-TK-47-CD, EMERGENCY DIESELS FUEL OIL STORAGE TANK:

This tank is buried and, by definition, not accessible. Per the screening criteria of Table 2-4 in EPRI NP-6041-SL [Ref. 7], the anchorage configurations of buried tanks are inherently seismically rugged and of no concern. A review of the flexibility of attached piping was performed in SQUG-12-TK-47-CD [Ref. 22.3] and the tank was evaluated for the potential seismic wave effects for the SSE and had a stress of 3.6 ksi. Since the factor of safety is on the order of 10, this screens for the RLGM which is an earthquake that is the SSE scaled by a factor of $1.93 < 10$.

Item 89, 1-HV-CEQ-2, CONTAINMENT HYDROGEN SKIMMER VENTILATION FAN #2:

HV-CEQ-2 is a large fan unit with very rugged anchorage. This was walked down during the NTTF 2.3 effort and the walkdown is documented in the Reference 15 report. The anchorage was in good condition and there were no potential adverse interactions. This was unchanged from the condition documented in SQUG-1-HV-CEQ-2 [Ref. 22.1]. This Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI 6041-SL [Ref. 7] by meeting the Generic Implementation Procedure (GIP) caveats [Ref. 30] as documented in SQUG-1-HV-CEQ-2 [Ref. 22.1]. A bounding analysis was performed in SQUG-1-HV-CEQ-1 [Ref. 22.2] and had a margin of $7.7 > 1.93$ RLGM scaling factor. Therefore this screens.

Item 139, 1-NPS-121, REACTOR COOLANT LOOP #2 HOT LEG WIDE RANGE PRESSURE TRANSMITTER:

This was a late addition to the ESEL after the walkdowns were completed as a result of reviews to changes in the August FLEX strategy. Per the USI A-46 walkdown SEWS the transmitter is mounted on a small floor mounted pipe stand anchored to the reinforced concrete floor with expansion anchors. The installation for 1-NPS-121, 1-NPS-122, 2-NPS-121 and 2-NPS-122 are similar. It is noted that the Foxboro transmitters for 1-NPS-121 and 2-NPS-122 in place during the USI A-46 walkdowns have been replaced with Rosemount transmitters but used the same mounting. An ANCHOR analysis [Ref. 22.6] for this installation indicated a factor of safety of 4.0 which is above the RLGM screening level of $1.93 < 4.0$.

Item 140, 1-NPS-122, REACTOR COOLANT LOOP #1 HOT LEG WIDE RANGE PRESSURE TRANSMITTER:

This was a late addition to the ESEL after the walkdowns were completed as a result of reviews to changes in the August FLEX strategy. Per the USI A-46 walkdown SEWS the transmitter is mounted on a small floor mounted pipe stand anchored to the reinforced concrete floor with expansion anchors. The installation for 1-NPS-121, 1-NPS-122, 2-NPS-121 and 2-NPS-122 are similar. The most limiting installation with the highest weight with the highest center of gravity was evaluated for 2-NPS-121 and the ANCHOR analysis [Ref. 22.7] indicated a factor of safety

of 2.7 which is above the RLGM screening level that is the SSE multiplied by a factor of 1.93 and therefore 1-NPS-122 is acceptable by comparison.

Item 141, 1-NRI-21, NUCLEAR INSTRUMENTATION CHANNEL I WIDE RANGE RADIATION DETECTOR:

The location of this detector was very close to the Reactor Vessel and was not accessible. It is screened based on similarity to other small instruments in containment. These are small instruments. The walkdown of accessible instruments of this type in containment determined they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 145, 1-NTQ-110A, RVLIS TRAIN 'A' UPPER TAP TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'A':

The location of this detector was very close to the Reactor Vessel and was not accessible. It is screened based on similarity to other small instruments in containment. These are small instruments. The walkdown of accessible instruments of this type in containment determined they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 146, 1-NTQ-110B, RVLIS TRAIN 'A' UPPER TAP TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'B':

The location of this detector was very close to the Reactor Vessel and was not accessible. It is screened based on similarity to other small instruments in containment. These are small instruments. The walkdown of accessible instruments of this type in containment determined they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 147, 1-NTQ-130A, RVLIS TRAIN 'A' CONDUIT TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'A':

The location of this detector was very close to the Reactor Vessel and was not accessible. It is screened based on similarity to other small instruments in containment. These are small instruments. The walkdown of accessible instruments of this type in containment demonstrated they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 148, 1-NTQ-130C, RVLIS TRAIN 'A' CONDUIT TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'C':

The location of this detector was very close to the Reactor Vessel and was not accessible. It is screened based on similarity to other small instruments in containment. These are small instruments. The walkdown of accessible instruments of this type in containment demonstrated

they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

The following items on the Unit 2 ESEL were screened in this manner:

Item 1, 12-TK-47-AB, AB EMERGENCY DIESEL FUEL OIL STORAGE TANK:

This tank is buried and, by definition, not accessible. Per the screening criteria of Table 2-4 in EPRI NP-6041-SL [Ref. 7], the anchorage configurations of buried tanks are inherently seismically rugged and of no concern. A review of the flexibility of attached piping was performed in SQUG-12-TK-47-AB [Ref. 22.4] and the tank was evaluated for the potential seismic wave effects for the SSE and had a stress of 3.6 ksi. Since the factor of safety is on the order of 10, this screens for the RLGM which is an earthquake that is the SSE scaled by a factor of 1.93 < 10.

Item 86, 2-HV-CEQ-2 CONTAINMENT HYDROGEN SKIMMER VENTILATION FAN #2:

2-HV-CEQ-2 is a large fan unit with very rugged anchorage. This was walked down during the NTTF 2.3 effort and the walkdown documented in the Reference 15 report. The anchorage was in good condition and there were no potential adverse interactions. This was unchanged from the condition documented in SQUG-2-HV-CEQ-2 [Ref. 22.5]. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL per meeting the GIP caveats [Ref. 30] as documented in SQUG-2-HV-CEQ-2 [Ref. 22.5]. A bounding analysis was performed in SQUG-1-HV-CEQ-1 [Ref. 22.2] and had a margin of 7.7 > 1.93 RLGM factor. Therefore this screens.

Item 97, 2-IMO-128, REACTOR COOLANT LOOP #2 HOT LEG TO RESIDUAL HEAT REMOVAL PUMPS SUCTION SHUTOFF VALVE:

This valve is inside the Unit 2 Containment and was not accessible during the walkdown effort, screened based on the walkdown of 1-IMO-128. Per the USI A-46 SEWS [Ref. 22.8], body and yoke is steel. Pipe diameter is 14". Measured offset = 64" <80" limit from Figure F-26 of EPRI-NP-6041-SL [Ref. 7]. Weight of operator = 460# maximum <750# limit Figure F-26 of EPRI- NP-6041-SL [Ref. 7]. Therefore, valve is screened for 0.8g to 1.2 g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 101, 2-LDISB-B10, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B10:

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 102, 2-LDISB-B11, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B11:

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 103, 2-LDISB-B12, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B12:

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 104, 2-LDISB-B18, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B18:

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 105, 2-LDISB-B19, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B19:

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 106, 2-LDISB-B20, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B20:

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 107, 2-LDISB-B21, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B21

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies

walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 108, 2-LDISB-B22, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B22

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 109, 2-LDISB-B23, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B23

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 114, 2-LDISB-B28, CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B28

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 116, 2-LDISB-B8 CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' IGNITER ASSEMBLY #B8

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 117, 2-LDISB-B9 CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B9

This Hydrogen igniter is inside the Unit 2 Containment and was not accessible during the NTTF 2.1 walkdowns. It was screened based on comparison to all the other 1-LDISB assemblies walkdown that had no adverse interactions, very rugged anchorage and contained rugged components.

Item 136, 2-NPS-121, REACTOR COOLANT LOOP #2 HOT LEG WIDE RANGE PRESSURE TRANSMITTER

This was a late addition to the ESEL after the walkdowns were completed as a result of reviews to changes in the August FLEX strategy. Per the USI A-46 walkdown SEWS the transmitter is mounted on a small floor mounted pipe stand anchored to the reinforced concrete floor with expansion anchors. The installation for 1-NPS-121, 1-NPS-122, 2-NPS-121 and 2-NPS-122 are similar. An ANCHOR analysis [Ref. 22.6] for this installation indicated a factor of safety of 4.0 which is above the RLGM screening level which is the SSE times a factor of 1.93.

Item 137, 2-NPS-122, REACTOR COOLANT LOOP #1 HOT LEG WIDE RANGE PRESSURE TRANSMITTER

This was a late addition to the ESEL after the walkdowns were completed as a result of reviews to changes in the August FLEX strategy. Per the USI A-46 walkdown SEWS the transmitter is mounted on a small floor mounted pipe stand anchored to the reinforced concrete floor with expansion anchors. The installation for 1-NPS-121, 1-NPS-122, 2-NPS-121 and 2-NPS-122 are similar. It is noted that the Foxboro transmitters for 1-NPS-121 and 2-NPS-122 in place during the USI A-46 walkdowns have been replaced with Rosemount transmitters but used the same mounting. An ANCHOR analysis [Ref. 22.7] for this installation indicated a factor of safety of 2.7 which is above the RLGM screening level which is the SSE times a factor of 1.93.

Item 138, 2-NRI-21, NUCLEAR INSTRUMENTATION CHANNEL I WIDE RANGE RADIATION DETECTOR

The location of this detector was very close to the Reactor Vessel and was not accessible. It is screened based on similarity to other small instruments in the Unit 1 containment. These are small instruments. The walkdown of accessible instruments of this type in containment determined they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 140, 2-NRV-152, PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVE

This valve was inaccessible. It is in the Unit 2 Pressurizer doghouse that was not accessible during the NTTF 2.1 walkdowns. Screened based on comparison to 1-NRV-152. The equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL [Ref. 7]. Offset for operator 40" within Earthquake Experience Data of Figure F-25 of EPRI NP-6041-SL, pipe Diameter 3".

Item 141, 2-NRV-153, PRESSURIZER OME-4 TRAIN 'A' PRESSURE RELIEF VALVE

This valve was inaccessible. It is in the Unit 2 Pressurizer doghouse that was not accessible during the NTTF 2.1 walkdowns. Screened based on comparison to 1-NRV-153. The equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL [Ref. 7]. Offset for

operator 40" within Earthquake Experience Data of Figure F-25 of EPRI NP-6041-SL [Ref. 7], pipe Diameter 3".

Item 142, 2-NTQ-110A, RVLIS TRAIN 'A' UPPER TAP TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'A'

The location of this detector was very close to the Reactor Vessel and was not accessible. It is screened based on similarity to other small instruments in the Unit 1 containment. These are small instruments. The walkdown of accessible instruments of this type in containment determined they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 143, 2-NTQ-110B, RVLIS TRAIN 'A' UPPER TAP TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'B'

The location of this detector was very close to the Reactor Vessel inside the Crane Wall and was not accessible. It is screened based on similarity to other small instruments in the Unit 1 containment. These are small instruments. The walkdown of accessible instruments of this type in containment determined they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 144, 2-NTQ-130A, RVLIS TRAIN 'A' CONDUIT TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'A'

The location of this detector was very close to the Reactor Vessel and was not accessible. It is screened based on similarity to other small instruments in the Unit 1 containment. These are small instruments. The walkdown of accessible instruments of this type in containment determined they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 145, 2-NTQ-130CRVLIS TRAIN 'A' CONDUIT TEMPERATURE COMPENSATION COMPUTER INPUT SPARE THERMAL SENSOR 'C'

The location of this detector was very close to the Reactor Vessel and was not accessible. It is screened based on similarity to other small instruments in the Unit 1 containment. These are small instruments. The walkdown of accessible instruments of this type in containment determined they were free of interactions and had very rugged anchorage. These were screened to the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 146, 2-NTR-110, REACTOR COOLANT LOOP #1 HOT LEG WIDE RANGE TEMPERATURE RECORDER THERMAL SENSOR

This small temperature sensor was inaccessible during the NTTF 2.1 walkdowns. It is in lower Containment, inside the Crane Wall and is only Accessible during an Outage. It was screened based on comparison to 1-NTR-110 and the other similar NTR's in the CNP Unit 1 Containment. It is a Conax Corp. Model 7H57-10000-01 Thermal Sensor, IEEE-344-1975 qualified by Conax

Corp. Seismic Analysis Report #IPS-943. Rugged component with no seismic interaction concerns. Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 147, 2-NTR-130, REACTOR COOLANT LOOP #3 HOT LEG WIDE RANGE TEMPERATURE RECORDER THERMAL SENSOR

This small temperature sensor was inaccessible during the NTTF 2.1 walkdowns. It is in lower Containment, inside the Crane Wall and is only Accessible during an Outage. It was screened based on comparison to 1-NTR-130 and the other similar NTR's in the CNP Unit 1 Containment. It is a Conax Corp. Model 7H57-10000-01 Thermal Sensor, IEEE-344-1975 qualified by Conax Corp. Seismic Analysis Report #IPS-943. Rugged component with no seismic interaction concerns. Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 148, 2-NTR-210 REACTOR COOLANT LOOP #1 COLD LEG WIDE RANGE TEMPERATURE RECORDER THERMAL SENSOR

This small temperature sensor was inaccessible during the NTTF 2.1 walkdowns. It is in lower Containment, inside the Crane Wall and is only Accessible during an Outage. It was screened based on comparison to 1-NTR-210 and the other similar NTR's in the CNP Unit 1 Containment. It is a Conax Corp. Model 7H57-10000-01 Thermal Sensor, IEEE-344-1975 qualified by Conax Corp. Seismic Analysis Report #IPS-943. Rugged component with no seismic interaction concerns. Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 149, 2-NTR-230, REACTOR COOLANT LOOP #3 COLD LEG WIDE RANGE TEMPERATURE RECORDER THERMAL SENSOR

This small temperature sensor was inaccessible during the NTTF 2.1 walkdowns. It is in lower Containment, inside the Crane Wall and is only accessible during an Outage. It was screened based on comparison to 1-NTR-230 and the other similar NTR's in the CNP Unit 1 Containment. It is a Conax Corp. Model 7H57-10000-01 Thermal Sensor, IEEE-344-1975 qualified by Conax Corp. Seismic Analysis Report #IPS-943. Rugged component with no seismic interaction concerns. Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL [Ref. 7].

Item 152, 2-OME-6-1, ACCUMULATOR TANK #1

This Accumulator Tank was added to the ESEL after the entry to the CNP Unit 2 containment was made. It is in lower Containment. It was screened based on comparison to 1-OME-6-1 and the other similar Accumulator Tanks in the CNP Unit 1 Containment. These were all found to be free from adverse seismic interactions during the walkdowns of the CNP Unit 1 Accumulators. A screening calculation was performed for the anchorage and had a very high margin above the RLGM. There was some minor rust found on some bases of the CNP Unit 1 Accumulators but none rose to a concern regarding its seismic capacity.

Item 153, 2-OME-6-2, ACCUMULATOR TANK #2

This Accumulator Tank was added to the ESEL after the entry to the CNP Unit 2 containment was made. It is in lower Containment. It was screened based on comparison to 1-OME-6-2 and the other similar Accumulator Tanks in the CNP Unit 1 Containment. These were all found to be free from adverse seismic interactions during the walkdowns of the CNP Unit 1 Accumulators. A screening calculation was performed for the anchorage and had a very high margin above the RLGM. There was some minor rust found on some bases of the CNP Unit 1 Accumulators but none rose to a concern regarding its seismic capacity.

Item 154, 2-OME-6-3, ACCUMULATOR TANK #3

This Accumulator Tank was added to the ESEL after the entry to the CNP Unit 2 containment was made. It is in lower Containment. It was screened based on comparison to 1-OME-6-3 and the other similar Accumulator Tanks in the CNP Unit 1 Containment. These were all found to be free from adverse seismic interactions during the walkdowns of the CNP Unit 1 Accumulators. A screening calculation was performed for the anchorage and had a very high margin above the RLGM. There was some minor rust found on some bases of the CNP Unit 1 Accumulators but none rose to a concern regarding its seismic capacity.

Item 155, 2-OME-6-4, ACCUMULATOR TANK #4

This Accumulator Tank was added to the ESEL after the entry to the CNP Unit 2 containment was made. It is in lower Containment. It was screened based on comparison to 1-OME-6-4 and the other similar Accumulator Tanks in the CNP Unit 1 Containment. These were all found to be free from adverse seismic interactions during the walkdowns of the CNP Unit 1 Accumulators. A screening calculation was performed for the anchorage and had a very high margin above the RLGM. There was some minor rust found on some bases of the CNP Unit 1 Accumulators but none rose to a concern regarding its seismic capacity.

Item 196, 2-TK-253-1, PRESSURIZER TRAIN 'A' PRESSURE RELIEF VALVE NRV-153 RESERVE CONTROL AIR TANK

This small horizontal tank was inaccessible during the NTTF 2.1 walkdowns. It is in lower Containment, inside the Crane Wall and is only accessible during an Outage. It is screened based on comparison to 1-TK-253-1 and the USI A-46 evaluation performed for this component. This horizontal tank contains air and is supported by other than standard saddles. Anchorage: Tank is sufficiently welded to building steel, and is more than adequate for the RLGM. Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7] by meeting the GIP caveats [Ref. 30] as documented in Reference 22.9. The anchorage of the small tank is more than adequate for the RLGM for this relatively small tank.

Item 197, 2-TK-253-2, PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVE NRV-152 RESERVE CONTROL AIR TANK

This small horizontal tank inaccessible during the NTTF 2.1 walkdowns, it is in lower Containment, inside the Crane Wall and is only accessible during an Outage. It is screened based on comparison to 1-TK-253-1 and the USI A-46 evaluation performed for this component. This horizontal tank contains air and is supported by other than standard saddles. Anchorage: Tank is sufficiently welded to building steel, and is more than adequate for the RLGM. Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL [Ref. 7] by meeting the GIP caveats [Ref. 30] as documented in Reference 22.10. The anchorage of the small tank is more than adequate for the RLGM for this relatively small tank.

All non-energized cabinets were opened when specialized tools were not needed to operate the cabinet doors. Photos were taken during the walkdowns. The existing calculations and SEWS from the USI A-46 evaluation of CNP [Ref. 16] were utilized to aid the SRT in their screening decisions as indicated in Attachments C and D of this report.

6.3.3 Significant Walkdown Findings

Consistent with the guidance from EPRI NP-6041-SL [Ref. 7], there were two findings noted during the CNP ESEP walkdowns relative to the site RLGM ISRS:

1. The three Boric Acid Storage Tanks (BASTs); 1-TK-12N, 2-TK-12S and 12-TK-12M, were found to have an anchorage HCLPF of 0.227g < 0.387g RLGM.
2. BAST Level Alarm Transmitters; 1-QLA-410, 12-QLA-420, 2-QLA-430, BAST Heater Temperature Controllers; 1-QTC-410, 2-QTC-430, 12-QTC-420, and BAST Transfer Pumps; 1-PP-46-1 and 2-PP-46-4, were determined to have a HCLPF of 0.227g < 0.387g RLGM due to seismic interaction with the three Boric Acid Storage Tanks.

Several block walls were identified in the proximity of ESEL equipment. These block walls were assessed for their structural adequacy to withstand the seismic loads resulting from the RLGM [Ref. 10.1]. For any cases where the block wall represented the HCLPF failure mode for an ESEL item, it is noted in the tabulated HCLPF values described in Section 6.6.

6.4 HCLPF Calculation Process

ESEL items were evaluated using the criteria in EPRI NP-6041-SL [Ref. 7]. 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-SL [Ref. 7] as described in Section 6.2.

- Performing HCLPF calculations considering various failure modes that include both structural failure modes (e.g. anchorage, load path etc.) and functional failure modes.

All HCLPF calculations were performed using the CDFM methodology and are documented in S&A calculations 13Q3208-CAL-004 [Ref. 10.1], 13Q3208-CAL-005 [Ref. 10.2], and 13Q3208-CAL-006 [Ref. 10.3].

Anchorage configurations for non-valve components were evaluated either by SRT judgment, large margins in existing design basis calculations, or CDFM based on HCLPF calculations [Refs. 10.1, 10.2 and 10.3]. The results of these analysis methods are documented in Attachment C and D for CNP Unit 1 and CNP Unit 2 respectively. For components beyond 40 ft. above grade, Table 2-4 of EPRI NP-6041-SL [Ref. 7] is not directly applicable.

Per Reference 2, the ESEP Guidance, screening for equipment below 40 ft. above grade is per the screening lanes contained in Tables 2-3 and 2-4 of EPRI NP-6041-SL [Ref. 7]. Since the peak of the RLGM established for the ESEP walkdowns is < 0.8g as shown in Figure 5-1, the 0.8g screening lane may be used for all equipment at or below about 40 ft. above grade. Grade has been established for CNP at El. 608 ft. per Reference 16. Due to the significant margin between the peak spectral acceleration of the screening lane (0.80g) and the peak of the RLGM (0.62g), equipment up to an elevation of 651 ft. meets the "about" 40 ft. limitation. Therefore, for equipment at elevations 651 ft. and below this screening is applicable.

All of the equipment in the ESEL for CNP Unit 1 and CNP Unit 2 other than some upper containment hydrogen igniters (1 & 2-UDISB components) are at Elevation 651 ft. or below. The limiting hydrogen igniters were addressed in the Reference 10.3 HCLPF calculation. These were the assemblies supported by the CNP Unit 1 and CNP Unit 2 catwalks in upper containment. The limiting HCLPF for these items were shown to be above the defined ISRS for the RLGM.

As described in Section 6.0, HCLPF calculations used the CDFM analysis criteria established in Section 6 of EPRI NP-6041-SL [Ref. 7] and are used for the detailed analysis of components. The relevant CDFM criteria from EPRI NP-6041-SL [Ref. 7] are summarized in Table 6-1.

.Table 6-4: CNP CDFM Criteria

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.
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.

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

U = Normal + Ec

Where:

- U = Ultimate strength per Section 6 of EPRI NP-6041-SL [Ref. 7]
- Ec = 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:

Ec = SFc*Eref

Where:

- Eref = reference earthquake from the relevant in-structure response spectrum (ISRS)
- SFc = component-specific scale factor that satisfies U = Normal +Ec

The HCLPF will be defined as the PGA produced by Ec. Because the CNP RLGM PGA is 0.387g:

HCLPF = 0.387g*SFc

6.5 Functional Evaluation of Relays

As discussed in the NTTF Recommendation 2.1 guidance [Ref. 2], the ESEL was to contain all relays and switches which may negatively "seal in" or "lock out" on the CNP ESEL [Ref. 25]. As discussed in Section 3.1.7 of this report none were identified and therefore, there were no HCLPFs for the Functional Evaluation of Relays calculated.

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 D for Unit 2. The following notes apply to the information in the tables.

- For items screened out using EPRI NP 6041-SL [Ref. 7] screening tables, the listed HCLPF is set to be equal to the RLGM PGA (0.387g) and the failure mode is listed as "Screened".
- For items where anchorage controls the HCLPF value, and the HCLPF is less than the RLGM PGA (0.387g), the HCLPF value is listed in the table and the failure mode is set to "Anchorage". When the anchorage HCLPF turned out to be above the RLGM PGA (0.387g), but controlled the HCLPF for the component then the value was also included in the summary tables. When the calculated HCLPF is determined to be well above the RLGM PGA (0.387g) and not limiting the failure mode, it is listed as "Screened" along with a note providing the anchorage HCLPF.
- For items where interaction controls the HCLPF value, and the HCLPF is less than the RLGM PGA (0.387g), the HCLPF value is listed in the table and the failure mode is set to "Interaction". When the interaction HCLPF turned out to be above the RLGM PGA (0.387g), the listed HCLPF is set to be equal to the RLGM PGA (0.387g) and the failure mode is listed as "Screened" along with a note providing the interaction HCLPF. It is noted that interaction did not control any HCLPFs except for those where the HCLPF was below the RLGM.

7.0 Inaccessible Items and Late Additions to the ESEL

7.1 Identification of Inaccessible Items and Late Additions to the ESEL

There were equipment items for which walkdowns were not performed and therefore, no SEWS were completed. Some of these items were late add-ons to the ESEL as a result of implementing the August 2014 FLEX strategy [Ref. 29].

Unit 1 Items include:

- ESEL Item 9, 12-QTC-420, MIDDLE BAST TK-12M TRAIN 'A' HTR TEMP CONTROLLER. It is noted that the HCLPF for this equipment item is limited by the HCLPF for the middle Boric Acid Storage Tank due to Seismic Interaction. The HCLPF for the tank was calculated in 13Q3208-CAL-005 to be 0.227g, (Ref. 10.2) and is less than the RLGM of 0.387g and therefore, 12-QTC-420 will not screen.
- ESEL Item 76, 1-FMO-211, TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 DISCHARGE TO STEAM GENERATOR OME-3-1 CONTROL VALVE
- ESEL Item 77, 1-FMO-221, TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 DISCHARGE TO STEAM GENERATOR OME-3-2 CONTROL VALVE
- ESEL Item 78, 1-FMO-231, TURBINE DRIVEN AUXILIARY FEED PUMP SUPPLY TO STEAM GENERATOR OME-3-3 CONTROL VALVE
- ESEL Item 79, 1-FMO-241, TURBINE DRIVEN AUXILIARY FEED PUMP SUPPLY TO STEAM GENERATOR OME-4-4 CONTROL VALVE
- ESEL Item 95, 1-ICM-321, WEST RHR TO REACTOR COOLANT LOOPS #2 AND #3 HOTLEGS CONTAINMENT ISOLATION VALVE

Unit 2 Items include:

- ESEL Item 73, 2-FMO-211, TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 DISCHARGETO STEAM GENERATOR OME-3-1 CONTROL VALVE
- ESEL Item 74, 2-FMO-221, TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 DISCHARGE TO STEAM GENERATOR OME-3-2 CONTROL VALVE
- ESEL Item 75, 2-FMO-231, TURBINE DRIVEN AUXILIARY FEED PUMP SUPPLY TO STEAM GENERATOR OME-3-3 CONTROL VALVE
- ESEL Item 76, 2-FMO-241, TURBINE DRIVEN AUXILIARY FEED PUMP SUPPLY TO STEAM GENERATOR OME-3-4 CONTROL VALVE
- ESEL Item 89, 2-ICM-111, RHR TO REACTOR COOLANT LOOPS #2 & #3 COLD LEGS CONTAINMENT ISOLATION VALVE
- ESEL Item 92, 2-ICM-321, WEST RHR TO REACTOR COOLANT LOOPS #2 AND #3 COLD LEGS CONTAINMENT ISOLATION VALVE

There were also items inaccessible during the screening walkdowns (e.g. items in the Unit 2 Lower Containment, inside the Crane Wall that are not accessible except during an outage).

Section 6.3.2 of this report includes a listing and discussion of the items for which a walkdown was not performed and therefore SEWS were not prepared. These items were screened in accordance with the EPRI NP-6041-SL [Ref. 7] guidance. There were also two items for which walkdowns were not performed that have been screened based on the results of the NTTF Recommendation 2.3 walkdowns [Ref. 18]. The implementation guidance contained in EPRI 3002000704 [Ref. 2] allows use of recent walkdown data including the NTTF 2.3 walkdowns. The basis for this screening is included in 6.3.2.

7.2 Planned Walkdown / Evaluation Schedule / Close Out

The schedule for performing walkdowns for the inaccessible and late addition components as listed in Section 7.1 is during the Unit 2 Refueling Outage U2C22 scheduled for the spring 2015. The screening and evaluation of these components will be complete within 90 days following the conclusion of the U2C22 refueling outage. The actions associated with these tasks are included in Section 8.4.

8.0 ESEP Conclusions and Results

8.1 Supporting Information

CNP has performed the ESEP as an interim action in response to the NRC's 50.54(f) letter [Ref. 1]. It was performed using the methodologies in the NRC endorsed guidance in EPRI 3002000704 [Ref. 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 CNP response to the NRC's 50.54(f) letter [Ref. 1]. On March 12, 2014, NEI submitted to the NRC results of a study [Ref. 12] 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 [Ref. 13] 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 CNP was included in the fleet risk evaluation submitted in the March 12, 2014 NEI letter [Ref. 12] therefore, the conclusions in the NRC's May 9 letter [Ref. 13] also apply to CNP.

In addition, the March 12, 2014 NEI letter [Ref. 12] 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.

The intent of the ESEP is to perform an interim action in response to the NRC's 50.54(f) letter [Ref. 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. In order to complete the ESEP in an expedited amount of time, the RLGM used for the ESEP evaluation is a scaled version of the plant's SSE rather than the actual GMRS. To more fully characterize the risk impacts of the seismic ground motion represented by the GMRS on a plant specific basis, a more detailed seismic risk assessment (SPRA or risk-based SMA) is to be performed in accordance with EPRI 1025287 [Ref. 14]. As identified in the CNP Seismic Hazard and GMRS submittal [Ref. 11], CNP screens in for a risk evaluation. The complete risk evaluation will more completely characterize the probabilistic seismic ground motion input into the plant, the plant response to that probabilistic seismic ground motion input, and the resulting plant risk characterization. CNP will complete that evaluation in accordance with the schedule identified in NEI's letter dated April 9, 2013 [Ref. 27] and endorsed by the NRC in their May 7, 2013 letter [Ref. 28].

8.2 Identification of Planned Modifications

There is one planned modification for each of the three Boric Acid Storage Tanks; 1-TK-12N, 2-TK-12S and 12-TK-12M that had an anchorage HCLPF of 0.227g < 0.387g RLGM [Ref. 10.3]. The modification will be designed to raise the HCLPF above the RLGM. This will also raise the

interaction HCLPF for the BAST Level Alarm Transmitters; 1-QLA-410, 12-QLA-420, 2-QLA-430, the BAST Heater Temperature Controllers; 1-QTC-410, 2-QTC-430, 12-QTC-420, and for the BAST Transfer Pumps; 1-PP-46-1 and 2-PP-46-4 that is the same as that for the anchorage HCLPF for the Boric Acid Tanks.

8.3 Modification Implementation Schedule

Plant modifications will be performed in accordance with the schedule identified in NEI letter dated April 9, 2013 [Ref. 27], which states that plant modifications not requiring a planned refueling outage will be completed by December 31, 2016 and modifications requiring a refueling outage will be completed within two planned refueling outages after December 31, 2014.

The modification of the three Boric Acid Storage Tanks, 1-TK-12N, 12-TK-12M, and 2-TK-12S, has not yet proceeded to a level of development to determine if a refueling outage is required to implement the modifications. As such, if a refueling outage is not required to implement these modifications, modification of the three Boric Acid Storage Tanks will be complete no later than December 31, 2016. If a refueling outage is required to implement the Boric Acid Storage Tanks anchorage modifications, these modifications will be completed by the end of the second planned refueling outage after December 31, 2014. The second Unit 1 planned refueling outage after December 31, 2014 is U1C28 currently scheduled to end in the 4th quarter 2017 and the second Unit 2 planned refueling outage after December 31, 2014 is U2C23 scheduled to end in the 4th quarter of 2016.

8.4 Summary of Actions

Item	Action	Date
1	Complete walkdowns for the inaccessible and late addition components listed in Section 7.1.	Prior to restart of Unit 2 at the completion of its spring 2015 refueling outage.
2	Complete screening and evaluation of the inaccessible and late addition components listed in Section 7.1.	Within 90 days following restart of Unit 2 at the completion of its spring 2015 refueling outage.
3	Complete ESEP plant modifications not requiring outages.	December 31, 2016 (2 years after ESEP report submittal)

Item	Action	Date
4	Complete ESEP plant modifications requiring outages.	Two outages from ESEP report submittal (U1C28 Fall 2017) (U2C23 Fall 2016)
5	Inform the NRC that the above noted evaluations and modifications are complete.	Within 60 days following completion of all above noted modifications.

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 Letter AEP-NRC-2013-13, from J. P. Gebbie, Indiana Michigan Power Company (I&M), to the NRC, "Donald C. Cook Nuclear Plant Unit 1 and Unit 2, 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)", February 27, 2013 (ML13101A381).

3.2 Letter AEP-NRC-2013-71, from J. P. Gebbie, I&M, to the NRC, "Donald C. Cook Nuclear Plant Units 1 and 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)", August 26, 2013 (ML13240A308).

3.3 Letter AEP-NRC-2014-17, from J. P. Gebbie, I&M, to the NRC, "Donald C. Cook Nuclear Plant Units 1 and 2, 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)", February 27, 2014 (ML14063A042).

3.4 Letter AEP-NRC-2014-66 from J. P. Gebbie, I&M, to the NRC, "Donald C. Cook Nuclear Plant Units 1 and 2, 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)", August 27, 2014 (ML14241A235).

4 Stevenson & Associates Report 13Q3208-RPT-003 – "Seismic Hazard and Screening Report for the Cook Nuclear Plant (CNP)", Rev. 1.

5 Nuclear Regulatory Commission, NUREG-1407, Procedural and Submittal Guidance for the Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities, June 1991.

6 Nuclear Regulatory Commission, Generic Letter No. 88-20 Supplement 4, Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities - 10CFR 50.54(f), June 1991.

7 A Methodology for Assessment of Nuclear Power Plant Seismic Margin, Rev. 1, August 1991, Electric Power Research Institute, Palo Alto, CA. EPRI NP-6041-SL.

8 Methodology for Developing Seismic Fragilities, August 1991, EPRI, Palo Alto, CA. 1994, TR-103959.

9 American Electric Service Corporation, Donald C. Cook Nuclear Plant Units 1 and 2, "Individual Plant Examination of External Events Summary Report", April, 1992.

10 CNP ESEP High Confidence of Low Probability of Failure (HCLPF) Calculations:

10.1 13Q3208-CAL-004, Rev. 1, "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Components".

10.2 13Q3208-CAL-005, Rev. 1, "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks".

10.3 13Q3208-CAL-006, Rev. 1, "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs".

11 NRC Letter AEP-NRC-2014-25, March 27, 2014.

12 Nuclear Energy Institute (NEI), A. Pietrangelo, Letter to D. Skeen of the USNRC, "Seismic Core Damage Risk Estimates Using the Updated Seismic Hazards for the Operating Nuclear Plants in the Central and Eastern United States", March 12, 2014.

13 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.

14 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.

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16 AEP Report, AEP:NRC:1040C, "Response to NRC G.L. 87-02 Unresolved Safety Issue A-46", AEPSC Task Group, January 1996.

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17.2 SD-000204-004, "Validation and Development of Turbine Building Response Spectra", Revision 0, March 28, 2000.

17.3 SD-991008-001, "Seismic Response Spectra for Containment Building", Revision 0, Feb. 26, 2000.

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22.2 SQUG-1-HV-CEQ-1, Rev. 0 (USI A-46 SEWS).

22.3 SQUG-12-TK-47-CD, Rev. 0 (USI A-46 SEWS).

22.4 SQUG-12-TK-47-AB, Rev. 0 (USI A-46 SEWS).

22.5 SQUG-2-HV-CEQ-2, Rev. 0 (USI A-46 SEWS).

22.6 SQUG-2-NPS-121, Rev. 0 (USI A-46 SEWS).

22.7 SQUG-2-NPS-122, Rev. 0 (USI A-46 SEWS).

22.8 SQUG-2-IMO-128, Rev. 0 (USI A-46 SEWS).

22.9 SQUG-2-TK-253-1, Rev. 0 (USI A-46 SEWS).

22.10 SQUG-2-TK-253-2, Rev. 0 (USI A-46 SEWS).

23 Stevenson & Associates Calculation 13Q3208-CAL-002, Rev. 2, "Response Spectra for Cook Nuclear Plant (CNP) Units 1 & 2 Expedited Seismic Evaluation Process (ESEP) Evaluations".

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26 D.C. Cook P&ID Drawings

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26.2 CNP Drawing OP-1-5105E, Rev. 1, "Main Steam".
26.3 CNP Drawing OP-1-5106A, Rev. 60, "Auxiliary Feedwater".
26.4 CNP Drawing OP-1-5113, Rev. 92, "Essential Service Water".
26.5 CNP Drawing OP-1-5113A, Rev. 9, "Essential Service Water".
26.6 CNP Drawing OP-1-5143, Rev. 76, "Emergency Core Cooling (RHR) Unit No. 1".
26.7 CNP Drawing OP-1-5135, Rev. 42, "Component Cooling Water Pumps and Component Cooling Water Heat Exchangers".
26.8 CNP Drawing OP-1-5135A, Rev. 43, "Component Cooling Water Safety Related Loads".
26.9 CNP Drawing OP-1-5143A, Rev. 5, "Emergency Core Cooling (RHR) Accumulator Piping".
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26.12 CNP Drawing OP-1-5142, Rev. 45, "Emergency Core Cooling (SIS)".
26.13 CNP Drawing OP-1-5128, Rev. 30, "Reactor Coolant Sheet 1 of 2".
26.14 CNP Drawing OP-1-5128A, Rev. 54, "Reactor Coolant - Sheet 2 of 2".
26.15 CNP Drawing OP-1-5120D, Rev. 34, "Containment Control Air 85# & 50# Ring Headers".
26.16 CNP Drawing OP-1-5151C, Rev. 54, "Emergency Diesel Generator CD".
26.17 CNP Drawing OP-1-5148C, Rev. 30, "Flow Diagram Diesel Generator Area & Electrical Switchgear Rooms Heating & Ventilation Sys Unit 1".
26.18 CNP Drawing OP-1-5149, Rev. 46, "Control Room Ventilation Unit No. 1".
26.19 CNP Drawing OP-2-5105D, Rev. 22, "Steam Generating System".
26.20 CNP Drawing OP-2-5105E, Rev. 1, "Main Steam".
26.21 CNP Drawing OP-2-5106A, Rev. 55, "Auxiliary Feedwater".
26.22 CNP Drawing OP-2-5113, Rev. 82, "Essential Service Water".
26.23 CNP Drawing OP-2-5113A, Rev. 9, "Essential Service Water".
26.24 CNP Drawing OP-2-5143, Rev. 72, "Flow Diagram Emergency Core Cooling (RHR) Unit No. 2".
26.25 CNP Drawing OP-2-5135, Rev. 37, "Component Cooling Water Pumps And Component Cooling Water Heat Exchangers".
26.26 CNP Drawing OP-2-5135A, Rev. 40, "Component Cooling Water Safety Related Loads".
26.27 CNP Drawing OP-2-5143A, Rev. 4, "Emergency Core Cooling (RHR) Accumulator Piping".

26.28 CNP Drawing OP-2-5129, Rev. 53, "Chemical & Volume Control System Reactor Letdown and Charging".
26.29 CNP Drawing OP-2-5142, Rev. 51, "Emergency Core Cooling (SIS)".
26.30 CNP Drawing OP-2-5128, Rev. 30, "Reactor Coolant Sheet 1 of 2".
26.31 CNP Drawing OP-2-5128A, Rev. 59, "Reactor Coolant Sheet 2 of 2".
26.32 CNP Drawing OP-2-5120D, Rev. 31, "Containment Control Air 85# & 50# Ring Headers".
26.33 CNP Drawing OP-2-5151A, Rev. 55, "Emergency Diesel Generator "AB"".
26.34 CNP Drawing OP-2-5148C, Rev. 31, "Flow Diagram Diesel Generator Area & Electrical Switchgear Rooms Heating & Ventilation Sys Unit 2".
26.35 CNP Drawing OP-2-5149, Rev. 54, "Control Room Ventilation".
26.36 CNP Drawing OP-1-12032, Rev. 20, "MCC Auxiliary 600V Bus 11C, 11D Engineered Safety System (Train A)".
26.37 CNP Drawing OP-2-12032, Rev. 14, "MCC Auxiliary One-Line 600V Bus 21C, 21D Engineered Safety System (Train A)".

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28. NRC (E Leeds) Letter to NEI (J Pollock), "Electric Power Research Institute Final Draft Report xxxxx, "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.
29. FLEX Plan Input Transmittal to Stevenson & Associates, August 25, 2014 (AEP Correspondence Control #2014-716).
30. "Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment," Revision 3, Updated May 16, 1997.

Attachment A– CNP Unit 1 ESEL

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
1	1-11A	600VAC BUS 11A SWITCHGEAR	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
2	1-11B	600VAC BUS 11B SWITCHGEAR	ENERGIZED	ENERGIZED	
3	1-11C	600VAC BUS 11C SWITCHGEAR	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only, 11C1 Breaker must be manually tripped
4	1-11D	600VAC BUS 11D SWITCHGEAR	ENERGIZED	ENERGIZED	
5	1-152-LDISB	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN >	ENERGIZED	ENERGIZED	
6	1-152-UDISB	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN >	ENERGIZED	ENERGIZED	
7	1-1A	4KV BUS 1A SWITCHGEAR	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
8	12-QLA-420	MIDDLE BORIC ACID STORAGE TANK TK-12M LEVEL ALARM TRANSMITTER	OPERATING	OPERATING	BAST Level Transmitter
9	12-QTC-420	MIDDLE BAST TK-12M TRAIN 'A' HTR TEMP CONTROLLER	OPERATING	OPERATING	BAST Temperature Transmitter
10	12-TK-12M	MIDDLE BORIC ACID STORAGE TANK	N/A	N/A	Passive Component
11	12-TK-47-CD	CD EMERGENCY DIESELS FUEL OIL STORAGE TANK	N/A	N/A	Passive Component
12	1-52-LDISB	CNTMT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' >	ENERGIZED	ENERGIZED	
13	1-52-UDISB	CNTMT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' >	ENERGIZED	ENERGIZED	
14	1-88X-LDISB	CNTMT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' >	NOT USED	ENERGIZED	
15	1-88X-UDISB	CNTMT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' >	NOT USED	ENERGIZED	
16	1-89-ABBC	PLANT BATTERY BATT-AB DISCONNECT SWITCH	ENERGIZED	ENERGIZED	
17	1-89-CDBC	PLANT BATTERY BATT-CD DISCONNECT SWITCH	ENERGIZED	ENERGIZED	
18	1-AB-A	600VAC MOTOR CONTROL CENTER AB-A	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
19	1-AB-D	600VAC MOTOR CONTROL CENTER AB-D	ENERGIZED	ENERGIZED	
20	1-ABD-B	600VAC MOTOR CONTROL CENTER ABD-B	ENERGIZED	ENERGIZED	
21	1-ABD-D	600VAC MOTOR CONTROL CENTER ABD-D	OPERATING	OPERATING	RCS Level, RWST Level
22	1-ABV-A	600VAC VALVE CONTROL CENTER ABV-A	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
23	1-AFWX	120/208VAC AUXILIARY FEEDWATER DISTRIBUTION PANEL	OPERATING	OPERATING	RCS Level, RWST Level
24	1-AM-A	600VAC MOTOR CONTROL CENTER AM-A	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
25	1-AZV-A	600VAC VALVE CONTROL CENTER AZV-A	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
26	1-BA	BORIC ACID CHARGING AND LETDOWN CONTROL PANEL	OPERATING	OPERATING	BAST Level, BAST Temperature Indicators, Separately Powered
27	1-BATT-AB	PLANT BATTERY AB	ENERGIZED	ENERGIZED	
28	1-BATT-AB-SH	PLANT BATTERY BATT-AB AMMETER SHUNT	ENERGIZED	ENERGIZED	
29	1-BATT-CD	PLANT BATTERY CD	ENERGIZED	ENERGIZED	
30	1-BATT-CD-SH	PLANT BATTERY BATT-CD AMMETER SHUNT	ENERGIZED	ENERGIZED	
31	1-BC-AB2	PLANT BATTERY BATT-AB CHARGER #2	ENERGIZED	ENERGIZED	
32	1-BC-CD1	PLANT BATTERY BATT-CD CHARGER #1	ENERGIZED	ENERGIZED	
33	1-BCTC-AB	PLANT BATTERY CHARGERS BC-AB1 AND BC-AB2 TRANSFER PANEL	ENERGIZED	ENERGIZED	
34	1-BCTC-CD	PLANT BATTERY CHARGERS BC-CD1 AND BC-CD2 TRANSFERPANEL	ENERGIZED	ENERGIZED	
35	1-BLI-110	STEAM GENERATOR OME-3-1 WIDE RANGE LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	SG Level Transmitter
36	1-BLI-120	STEAM GENERATOR OME-3-2 WIDE RANGE LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	SG Level Transmitter
37	1-BLI-130	STEAM GENERATOR OME-3-3 WIDE RANGE LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	SG Level Transmitter
38	1-BLI-140	STEAM GENERATOR OME-3-4 WIDE RANGE LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	SG Level Transmitter
39	1-CCV-AB	250VDC TRAIN 'B' CRITICAL SOLENOID VALVES DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
40	1-CCV-CD	250VDC TRAIN 'A' CRITICAL SOLENOID VALVES DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
41	1-CCW	COMPONENT COOLING WATER CONTROL PANEL	OPERATING	AVAILABLE	Hand Switches powered separately

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
42	1-CG1-14	REACTOR PROTECTION CONTROL GROUP #1 CABINET #14	OPERATING	OPERATING	SG Level, RCS Injection Flow
43	1-CG1-15	REACTOR PROTECTION CONTROL GROUP #1 CABINET #15	OPERATING	OPERATING	BAST Level
44	1-CG2-17	REACTOR PROTECTION CONTROL GROUP #2 CABINET #17	OPERATING	OPERATING	RCS Injection Flow
45	1-CG2-19	REACTOR PROTECTION CONTROL GROUP #2 CABINET #19	OPERATING	OPERATING	RCS Injection Flow Instrumentation
46	1-CG3-20	REACTOR PROTECTION CONTROL GROUP #3 CABINET #20	OPERATING	OPERATING	RCS Injection Flow
47	1-CG3-21	REACTOR PROTECTION CONTROL GROUP #3 CABINET #21	OPERATING	OPERATING	Containment Pressure, RWST Level, BAST Level, RCS Injection Flow
48	1-CG4-22	REACTOR PROTECTION CONTROL GROUP #4 CABINET #22	OPERATING	OPERATING	RCS Injection Flow
49	1-CG4-23	REACTOR PROTECTION CONTROL GROUP #4 CABINET #23	OPERATING	OPERATING	SG Level
50	1-CLI-114	CONDENSATE STORAGE TANK TK-32 LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	CST Level Transmitter
51	1-CMO-413	COMPONENT COOLING WATER PUMPS SUCTION CROSSTIE TRAIN 'B' SHUTOFF VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
52	1-CMO-414	COMPONENT COOLING WATER PUMPS DISCHARGE CROSS TIE TRAIN 'B' SHUTOFF VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
53	1-CMO-416	COMPONENT COOLING WATER TO MISCELLANEOUS SERVICE TRAIN 'B' SHUTOFF VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
54	1-CMO-429	WEST RESIDUAL HEAT REMOVAL HEAT EXCHANGER COMPONENT COOLING WATER OUTLET SHUTOFF VALVE	CLOSED	OPEN	Power Available in Phase 3 Only
55	1-CP	CONDENSATE PUMP CONTROL PANEL	OPERATING	OPERATING	CST Level Indicator, Separately Powered

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
56	1-CRID-1	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL I DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
57	1-CRID-1-INV	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION SYSTEM >	ENERGIZED	ENERGIZED	
58	1-CRID-2	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL II DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
59	1-CRID-2-INV	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION SYSTEM >	ENERGIZED	ENERGIZED	
60	1-CRID-3	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL III DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
61	1-CRID-3-INV	120VAC CONTROL ROOM INSTRUMENTATION DISTRIBUTION >	ENERGIZED	ENERGIZED	
62	1-CRID-4	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL IV DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
63	1-CRID-4-INV	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION SYSTEM >	ENERGIZED	ENERGIZED	
64	1-DTU	DELTA 'T' AND UNIT CONTROL PANEL	OPERATING	OPERATING	RCS Temperature Recorder
65	1-ELSC	120/208VAC EMERGENCY LOCAL SHUTDOWN DISTRIBUTIONPANEL	ENERGIZED	ENERGIZED	
66	1-EZC-B	600VAC MOTOR CONTROL CENTER EZC-B	ENERGIZED	ENERGIZED	
67	1-EZC-C	600VAC MOTOR CONTROL CENTER EZC-C	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
68	1-EZC-D	600VAC MOTOR CONTROL CENTER EZC-D	ENERGIZED	ENERGIZED	
69	1-FFI-210	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-1 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	AFW Flow Transmitter
70	1-FFI-220	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-2 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	AFW Flow Transmitter

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
71	1-FFI-230	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-3 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	AFW Flow Transmitter
72	1-FFI-240	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-4 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	AFW Flow Transmitter
73	1-FI	FIXED INCORE CONTROL PANEL	OPERATING	OPERATING	Core Exit Temperature Recorder
74	1-FICT-A	REACTOR CORE THERMO COUPLE TRAIN 'A' TRANSMITTER CABINET	OPERATING	OPERATING	Core Exit Temperature
75	1-FLX	FLUX CONTROL PANEL	OPERATING	OPERATING	Neutron Flux Indicator, Separately Powered
76	1-FMO-211	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 DISCHARGE TO STEAM GENERATOR OME-3-1 CONTROL VALVE	THROTTLED	THROTTLED	Throttle position will be adjusted during FLEX using the local manual operator hand wheel
77	1-FMO-221	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 DISCHARGE TO STEAM GENERATOR OME-3-2 CONTROL VALVE	THROTTLED	THROTTLED	Throttle position will be adjusted during FLEX using the local manual operator hand wheel
78	1-FMO-231	TURBINE DRIVEN AUXILIARY FEED PUMP SUPPLY TO STEAM GENERATOR OME-3-3 CONTROL VALVE	THROTTLED	THROTTLED	Throttle position will be adjusted during FLEX using the local manual operator hand wheel
79	1-FMO-241	TURBINE DRIVEN AUXILIARY FEED PUMP SUPPLY TO STEAM GENERATOR OME-4-4 CONTROL VALVE	THROTTLED	THROTTLED	Throttle position will be adjusted during FLEX using the local manual operator hand wheel
80	1-HE-15W	WEST COMPONENT COOLING WATER HEAT EXCHANGER	N/A	N/A	Passive Component
81	1-HE-17W	WEST RESIDUAL HEAT REMOVAL HEAT EXCHANGER	N/A	N/A	Passive Component
82	1-HSD1	UNIT 1 HOT SHUTDOWN PANEL	ENERGIZED	ENERGIZED	
83	1-HV-ACR-2	CONTROL ROOM AIR CONDITIONING SOUTH LIQUID CHILLER	AS NEEDED	OPERATING	Power Available in Phase 3 Only
84	1-HV-ACRA-2	CONTROL ROOM VENTILATION SOUTH AIR CONDITIONINGUNIT	AS NEEDED	OPERATING	Power Available in Phase 3 Only
85	1-HV-ACR-DA-2	OUTSIDE AIR TO CONTROL ROOM PRESSURIZATION/CLEANUPFILTER UNIT HV-ACRF VENT DAMPER	OPERATING	OPERATING	Power Available in Phase 3 Only

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
86	1-HV-ACRF	CONTROL ROOM PRESSURIZATION/CLEANUP FILTER UNIT	N/A	N/A	Passive Component
87	1-HV-ACRF-2	CONTROL ROOM PRESSURIZATION/CLEANUP FILTER UNIT VENT FAN #2	AS NEEDED	OPERATING	Power Available in Phase 3 Only
88	1-HV-ACR-H2	CONTROL ROOM VENTILATION SOUTH DUCT ELECTRIC HEATING UNIT	OPERATING	OPERATING	Power Available in Phase 3 Only
89	1-HV-CEQ-2	1-HV-CEQ-2, CONTAINMENT HYDROGEN SKIMMER VENTILATION FAN #2	AS NEEDED	OPERATING	Power Available in Phase 3 Only
90	1-HV-SGRX-5	AB BATTERY EQUIPMENT AREA BATTERY ROOM VENTILATION EXHAUST FAN	AS NEEDED	OPERATING	Battery Room AB Ventilation, Controlled Locally
91	1-HV-SGRX-6	CD BATTERY EQUIPMENT AREA BATTERY ROOM VENTILATIONEXHAUST FAN	AS NEEDED	OPERATING	Battery Room CD Ventilation, Controlled Locally
92	1-ICM-111	RHR TO REACTOR COOLANT LOOPS #2 & #3 COLD LEGS CONTAINMENT ISOLATION VALVE	CLOSED	OPEN	Power Available in Phase 3 Only
93	1-ICM-129	REACTOR COOLANT LOOP #2 HOT LEG TO RESIDUAL HEATREMOVAL PUMPS SUCTION CONTAINMENT ISOLATION VALVE	CLOSED	OPEN	Needs closure of PB 403AX relay permissive, Power Available in Phase 3 Only
94	1-ICM-251	BORON INJECTION TANK TRAIN 'B' OUTLET CONTAINMENT >	CLOSED	OPEN	Power Available in Phase 3 Only
95	1-ICM-321	WEST RHR TO REACTOR COOLANT LOOPS #2 AND #3 HOT LEGS CONTAINMENT ISOLATION VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
96	1-IFI-51	BORON INJECTION TO REACTOR COOLANT LOOP #1 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	RCS Injection Flow Transmitter
97	1-IFI-52	BORON INJECTION TO REACTOR COOLANT LOOP #2 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	RCS Injection Flow Transmitter
98	1-IFI-53	BORON INJECTION TO REACTOR COOLANT LOOP #3 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	RCS Injection Flow Transmitter

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
99	1-IFI-54	BORON INJECTION TO REACTOR COOLANT LOOP #4 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	RCS Injection Flow Transmitter
100	1-IMO-128	REACTOR COOLANT LOOP #2 HOT LEG TO RESIDUAL HEAT REMOVAL PUMPS SUCTION SHUTOFF VALVE	CLOSED	OPEN	Needs closure of PB 405AX relay permissive
101	1-IMO-256	BORON INJECTION TANK TRAIN 'B' INLET SHUTOFF VALVE	CLOSED	OPEN	Power Available in Phase 3 Only
102	1-IMO-310	EAST RESIDUAL HEAT REMOVAL PUMP PP-35E SUCTION SHUTOFF VALVE	OPEN	CLOSED	Local manual operation with the operator hand wheel is credited for FLEX Response
103	1-IMO-324	WEST RHR HX 1-HE-17W DISCHARGE CROSSTIE SHUTOFF VALVE	CLOSED	OPEN	Local manual operation with the operator hand wheel is credited for FLEX Response
104	1-LDISB-B19	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B19	NOT USED	OPERATING	
105	1-LDISB-B20	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B20	NOT USED	OPERATING	
106	1-LDISB-B21	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B21	NOT USED	OPERATING	
107	1-LDISB-B22	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B22	NOT USED	OPERATING	
108	1-LDISB-B23	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B23	NOT USED	OPERATING	
109	1-LDISB-B24	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B24	NOT USED	OPERATING	
110	1-LDISB-B25	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B25	NOT USED	OPERATING	
111	1-LDISB-B26	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B26	NOT USED	OPERATING	

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
112	1-LDISB-B27	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B27	NOT USED	OPERATING	
113	1-LDISB-B28	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B28	NOT USED	OPERATING	
114	1-LDISB-B29	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B29	NOT USED	OPERATING	
115	1-LDISB-B30	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B30	NOT USED	OPERATING	
116	1-LDISB-B31	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B31	NOT USED	OPERATING	
117	1-LDISB-B32	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B32	NOT USED	OPERATING	
118	1-LDISB-B33	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B33	NOT USED	OPERATING	
119	1-LDISB-B34	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B34	NOT USED	OPERATING	
120	1-LDISB-B35	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B35	NOT USED	OPERATING	
121	1-LSI-1	STEAM GENERATORS #1 AND #4 LOCAL SHUTDOWN STATION	NON-OPERATING (REMOTE)	REMOTE	Contains SG Level Transmitter Transfer Relay, power N/A as de-energized is desired relay state
122	1-LSI-2	STEAM GENERATORS #2 AND #3 LOCAL SHUTDOWN STATION	NON-OPERATING (REMOTE)	REMOTE	Contains SG Level Transmitter Transfer Relay, power N/A as de-energized is desired relay state
123	1-LSI-3	REACTOR COOLANT SYSTEM CHARGING AND LETDOWN LOCAL SHUTDOWN STATION	NON-OPERATING (REMOTE)	REMOTE	NPS-122 RCS Pressure Transmitter Transfer Relay, power N/A as de-energized is desired relay state

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
124	1-MCAB	250VDC DISTRIBUTION PANEL MCAB	ENERGIZED	ENERGIZED	
125	1-MCCD	250VDC DISTRIBUTION POWER PANEL	OPERATING	OPERATING	Various Instruments
126	1-MDAB	250VDC DISTRIBUTION PANEL MDAB	ENERGIZED	ENERGIZED	
127	1-MDCD	250VDC DISTRIBUTION PANEL MDCD	ENERGIZED	ENERGIZED	
128	1-MPP-210	STEAM GENERATOR OME-3-1 CHANNEL I STEAM PRESSURE TRANSMITTER	OPERATING	OPERATING	SG Pressure Transmitter
129	1-MPP-220	STEAM GENERATOR OME-3-2 CHANNEL I STEAM PRESSURE TRANSMITTER	OPERATING	OPERATING	SG Pressure Transmitter
130	1-MPP-230	STEAM GENERATOR OME-3-3 CHANNEL I STEAM PRESSURE TRANSMITTER	OPERATING	OPERATING	SG Pressure Transmitter
131	1-MPP-240	STEAM GENERATOR OME-3-4 CHANNEL I STEAM PRESSURE TRANSMITTER	OPERATING	OPERATING	SG Pressure Transmitter
132	1-MRV-213	STEAM GENERATOR OME-3-1 POWER OPERATED RELIEF VALVE	CLOSED	OPEN	Fail Closed, Local manual operation with the operator hand wheel is credited for FLEX Response to throttle the valve
133	1-MRV-223	STEAM GENERATOR OME-3-2 POWER OPERATED RELIEF VALVE	CLOSED	OPEN	Fail Closed, Local manual operation with the operator hand wheel is credited for FLEX Response to throttle the valve
134	1-MRV-233	STEAM GENERATOR OME-3-3 POWER OPERATED RELIEF VALVE	CLOSED	OPEN	Fail Closed, Local manual operation with the operator hand wheel is credited for FLEX Response to throttle the valve
135	1-MRV-243	STEAM GENERATOR OME-3-4 POWER OPERATED RELIEF VALVE	CLOSED	OPEN	Fail Closed, Local manual operation with the operator hand wheel is credited for FLEX Response to throttle the valve
136	1-NIS-I	NUCLEAR INSTRUMENTATION SYSTEM PROTECTION CHANNEL I CONTROL PANEL	OPERATING	OPERATING	Neutron Flux Indicator, Separately Powered
137	1-NLP-151	PRESSURIZER OME-4 PROTECTION CHANNEL I LEVELTRANSMITTER	OPERATING	OPERATING	Pressurizer Level Transmitter
138	1-NPS-110	& VER ADDED PER SETPOINT PROJECT REACTOR VESSEL TRAIN 'A' WIDE RANGE PRESSURE TRANSMITTER	OPERATING	OPERATING	RCS Pressure Transmitter, also used for RCS Level (RVLIS)

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
139	1-NPS-121	REACTOR COOLANT LOOP #2 HOT LEG WIDE RANGE PRESSURE TRANSMITTER	OPERATING	OPERATING	Required for valve ICM-129 pressure permissive
140	1-NPS-122	REACTOR COOLANT LOOP #1 HOT LEG WIDE RANGE PRESSURE TRANSMITTER	OPERATING	OPERATING	Required for valve IMO-128 pressure permissive
141	1-NRI-21	NUCLEAR INSTRUMENTATION CHANNEL I WIDE RANGE RADIATION DETECTOR	OPERATING	OPERATING	Neutron Flux
142	1-NRI-21-AMP	NUCLEAR INSTRUMENTATION WIDE RANGE RADIATION AMPLIFIER	OPERATING	OPERATING	Neutron Flux
143	1-NRV-152	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVE	CLOSED	OPEN	Fail Closed
144	1-NRV-153	PRESSURIZER OME-4 TRAIN 'A' PRESSURE RELIEF VALVE	CLOSED	OPEN	Fail Closed
145	1-NTQ-110A	RVLIS TRAIN 'A' UPPER TAP TEMPERATURE COMPENSATIONCOMPUTER INPUT THERMAL SENSOR 'A'	OPERATING	OPERATING	Temperature Transmitter used for RCS Level (RVLIS)
146	1-NTQ-110B	RVLIS TRAIN 'A' UPPER TAP TEMPERATURE COMPENSATIONCOMPUTER INPUT THERMAL SENSOR 'B'	OPERATING	OPERATING	Temperature Transmitter used for RCS Level (RVLIS)
147	1-NTQ-130A	RVLIS TRAIN 'A' CONDUIT TEMPERATURE COMPENSATIONCOMPUTER INPUT THERMAL SENSOR 'A'	OPERATING	OPERATING	Temperature Transmitter used for RCS Level (RVLIS)
148	1-NTQ-130C	RVLIS TRAIN 'A' CONDUIT TEMPERATURE COMPENSATIONCOMPUTER INPUT THERMAL SENSOR 'C'	OPERATING	OPERATING	Temperature Transmitter used for RCS Level (RVLIS)
149	1-NTR-110	REACTOR COOLANT LOOP #1 HOT LEG WIDE RANGETEMPERATURE RECORDER THERMAL SENSOR	OPERATING	OPERATING	RCS Temperature Transmitter
150	1-NTR-130	REACTOR COOLANT LOOP #3 HOT LEG WIDE RANGETEMPERATURE RECORDER THERMAL SENSOR	OPERATING	OPERATING	RCS Temperature Transmitter, also used for RCS Level (RVLIS)
151	1-NTR-210	REACTOR COOLANT LOOP #1 COLD LEG WIDE RANGETEMPERATURE RECORDER THERMAL SENSOR	OPERATING	OPERATING	RCS Temperature Transmitter

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
152	1-NTR-230	REACTOR COOLANT LOOP #3 COLD LEG WIDE RANGETEMPERATURE RECORDER THERMAL SENSOR	OPERATING	OPERATING	RCS Temperature Transmitter
153	1-OME-33	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 SUCTION >	N/A	N/A	Passive Component
154	1-OME-34W	WEST ESSENTIAL SERVICE WATER PUMP PP-7W DISCHARGESTRAINER	OPERATING	OPERATING	Passive component when used in FLEX response
155	1-OME-6-1	ACCUMULATOR TANK #1	N/A	N/A	Passive Component
156	1-OME-6-2	ACCUMULATOR TANK #2	N/A	N/A	Passive Component
157	1-OME-6-3	ACCUMULATOR TANK #3	N/A	N/A	Passive Component
158	1-OME-6-4	ACCUMULATOR TANK #4	N/A	N/A	Passive Component
159	1-PP-10W	WEST COMPONENT COOLING WATER PUMP	OPERATING OR AVAILABLE	OPERATING	Power Available in Phase 3 Only
160	1-PP-35W	WEST RESIDUAL HEAT REMOVAL PUMP	AVAILABLE	OPERATING	Power Available in Phase 3 Only
161	1-PP-4	TURBINE DRIVEN AUXILIARY FEED PUMP	STOP	RUN	Via ROB Turbine 1-OME-39
162	1-PP-46-1	BORIC ACID STORAGE TANKS TRANSFER PUMP #1	NOT USED	OPERATING	Pump used in Phase 3 after NSRC Generator Installed
163	1-PP-82S	CONTROL ROOM AIR CONDITIONING SOUTH CHILL WATER CIRCULATION PUMP	AS NEEDED	OPERATING	Power Available in Phase 3 Only
164	1-PPA-310	UPPER CONTAINMENT CHANNEL III WIDE RANGE PRESSURE ALARM TRANSMITTER	OPERATING	OPERATING	Containment Pressure Transmitter
165	1-PRZ	PRESSURIZER CONTROL PANEL	OPERATING	OPERATING	Pressurizer level Indicator Separately Powered
166	1-QLA-410	NORTH BORIC ACID STORAGE TANK TK-12N LEVEL ALARMTRANSMITTER	OPERATING	OPERATING	BAST Level Transmitter
167	1-QRV-200	CVCS CHARGING TO REGENERATIVE HEAT EXCHANGER FLOW CONTROL VALVE	OPEN	CLOSED	Fails to desired position on loss of instrument air
168	1-QT-506	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 TRIP ANDTHROTTLE VALVE	CLOSED	OPERATING	Local Manual Operation at the operator hand wheel/mechanical trip reset is credited for FLEX Response

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
169	1-QT-507	AUXILIARY FEED PUMP TURBINE GOVERNOR VALVE	CLOSED	OPERATING	Control via 1-QT-507-KR governor (ROB)
170	1-QTC-410	NORTH BAST TK-12N TRAIN 'A' HTR TEMP CONTROLLER	OPERATING	OPERATING	BAST Temperature Transmitter
171	1-RHR	RESIDUAL HEAT REMOVAL CONTROL PANEL	OPERATING	AVAILABLE	Hand Switches powered separately
172	1-RPC-1-1	REACTOR PROTECTION CHANNEL I CABINET #1	OPERATING	OPERATING	AFW Flow, Pressurizer level
173	1-RPC-1-2	REACTOR PROTECTION CHANNEL I CABINET #2	OPERATING	OPERATING	AFW Flow
174	1-RPC-1-3	REACTOR PROTECTION CHANNEL I CABINET #3	OPERATING	OPERATING	SG Pressure
175	1-RPC-1-4	REACTOR PROTECTION CHANNEL I CABINET #4	OPERATING	OPERATING	SG Pressure
176	1-RPC-2-5	REACTOR PROTECTION CHANNEL II CABINET #5	OPERATING	OPERATING	RWST Level, RCS Pressure Permissive
177	1-RPC-2-6	REACTOR PROTECTION CHANNEL II CABINET #6	OPERATING	OPERATING	AFW Flow, RCS Temperature, RWST Level
178	1-RPC-2-7	REACTOR PROTECTION CHANNEL II CABINET #7	OPERATING	OPERATING	RCS Temperature
179	1-RPC-2-8	REACTOR PROTECTION CHANNEL II CABINET #8	OPERATING	OPERATING	RCS Pressure, RCS Level
180	1-RPC-3-10	REACTOR PROTECTION CHANNEL III CABINET #10	OPERATING	OPERATING	CST Level
181	1-RPC-3-9	REACTOR PROTECTION CHANNEL III CABINET #9	OPERATING	OPERATING	AFW Flow, CST Level, RCS Temperature, RCS Pressure Permissive
182	1-RPC-4-12	REACTOR PROTECTION CHANNEL IV CABINET #12	OPERATING	OPERATING	AFW Flow
183	1-RPS-A	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'A' CABINET	OPERATING	OPERATING	Contains portion of permissive circuit for ICM-129
184	1-RPS-B	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'B' CABINET	OPERATING	OPERATING	Contains portion of permissive circuit for IMO-128
185	1-RPSX-A	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'A' AUXILIARY CABINET	OPERATING	OPERATING	Contains PB 403AX relay permissive
186	1-RPSX-B	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'B' AUXILIARY CABINET	OPERATING	OPERATING	Contains PB 405AX relay permissive
187	1-RVLC	REACTOR VESSEL OME-1 WATER LEVEL INSTRUMENTATION CABINET	OPERATING	OPERATING	RCS Level
188	1-SA	STATION AUXILIARIES CONTROL PANEL	OPERATING	AVAILABLE	Hand Switches powered separately

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
189	1-SG	STEAM GENERATOR AND AUXILIARY FEED PUMP CONTROLPANEL	OPERATING	OPERATING	AFW Flow, SG Level, and SG Pressure Indicators; Manual Control of Main Steam PORVs - Note that valve position indicator and pressure indicator on valve controllers are not credited. Separate Credited SG Pressure Indicators Must be used.
190	1-SIS	SAFETY INJECTION CONTROL PANEL	OPERATING	OPERATING	Control Switches, RCS Pressure Indicator, RCS Level Indicator, All Separately Powered
191	1-SPY	CONTAINMENT SPRAY CONTROL PANEL	OPERATING	OPERATING	Containment Pressure Indicator, RWST Level Recorder
192	1-SSR	ENGINEER SAFETY SYSTEM REAR INSTRUMENT/RELAY RACK	OPERATING	AVAILABLE	Contains 1-CMO-429 AC control relay (powered separately)
193	1-SWR	NUCLEAR INSTRUMENTAL SOURCE RANGE N21INSTRUMENT/RELAY RACK	OPERATING	OPERATING	Neutron Flux Instrumentation
194	1-T11A	4KV BUS T11A SWITCHGEAR	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only, Emergency feed breaker T11A12 must be manually tripped
195	1-TDAB	250VDC TRAIN 'B' TRANSFER CABINET	ENERGIZED	ENERGIZED	
196	1-TDCD	250VDC TRAIN 'A' TRANSFER CABINET	ENERGIZED	ENERGIZED	
197	1-TK-11	BORON INJECTION TANK	N/A	N/A	Passive Component
198	1-TK-12N	NORTH BORIC ACID STORAGE TANK	N/A	N/A	Passive Component
199	1-TK-253-1	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVENRV-152 RESERVE CONTROL AIR TANK	N/A	N/A	Passive Component
200	1-TK-253-2	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VALVENRV-153 RESERVE CONTROL AIR TANK	N/A	N/A	Passive Component
201	1-TK-253-3	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VLV NRV-152EMERGENCY AIR TANK	N/A	N/A	Passive Component
202	1-TK-253-4	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VLV NRV-153EMERGENCY AIR TANK	N/A	N/A	Passive Component
203	1-TK-253-5	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVENRV-152 EMERGENCY AIR TANK	N/A	N/A	Passive Component

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
204	1-TK-253-6	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VALVENRV-153 EMERGENCY AIR TANK	N/A	N/A	Passive Component
205	1-TK-253-7	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVENRV-152 EMERGENCY AIR TANK	N/A	N/A	Passive Component
206	1-TK-253-8	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VALVENRV-153 EMERGENCY AIR TANK	N/A	N/A	Passive Component
207	1-TK-32	CONDENSATE STORAGE TANK	N/A	N/A	Passive Component
208	1-TK-37	COMPONENT COOLING WATER SURGE TANK	N/A	N/A	Passive Component
209	1-TR11A	600VAC BUS 11A SUPPLY TRANSFORMER	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
210	1-TR-AFWX	120/208VAC AUXILIARY FEEDWATER DISTRIBUTION PANELAFWX REGULATING TRANSFORMER	ENERGIZED	ENERGIZED	Regulating Transformer
211	1-TR-ELSC	120/208VAC EMERGENCY LOCAL SHUTDOWN DISTRIBUTIONPANEL ELSC SUPPLY TRANSFORMER	ENERGIZED	ENERGIZED	
212	1-UDISB-B1	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B1	NOT USED	OPERATING	
213	1-UDISB-B10	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B10	NOT USED	OPERATING	
214	1-UDISB-B11	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B11	NOT USED	OPERATING	
215	1-UDISB-B12	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B12	NOT USED	OPERATING	
216	1-UDISB-B13	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B13	NOT USED	OPERATING	
217	1-UDISB-B14	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B14	NOT USED	OPERATING	

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
218	1-UDISB-B15	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B15	NOT USED	OPERATING	
219	1-UDISB-B16	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B16	NOT USED	OPERATING	
220	1-UDISB-B17	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B17	NOT USED	OPERATING	
221	1-UDISB-B18	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B18	NOT USED	OPERATING	
222	1-UDISB-B2	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B2	NOT USED	OPERATING	
223	1-UDISB-B3	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B3	NOT USED	OPERATING	
224	1-UDISB-B4	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B4	NOT USED	OPERATING	
225	1-UDISB-B5	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B5	NOT USED	OPERATING	
226	1-UDISB-B6	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B6	NOT USED	OPERATING	
227	1-UDISB-B7	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B7	NOT USED	OPERATING	
228	1-UDISB-B8	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B8	NOT USED	OPERATING	
229	1-UDISB-B9	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B9	NOT USED	OPERATING	

CNP Unit 1 ESEL					
CNP Unit 1 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
230	1-VR-LDISB-4	LOWER CONTAINMENT TRAIN B DISTRIBUTED IGNITION SYSTEM VOLTAGE REGULATOR	NOT USED	OPERATING	
231	1-VR-UDISB-3	UPPER CONTAINMENT TRAIN B DISTRIBUTED IGNITION SYSTEM VOLTAGE REGULATOR	NOT USED	OPERATING	
232	1-VS	VENTILATION CONTROL PANEL	OPERATING	AVAILABLE	Hand Switches powered separately
233	1-WMO-715	WEST CONTAINMENT SPRAY HEAT EXCHANGER 1-HE-18W ESSENTIAL SERVICE WATER INLET SHUTOFF VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
234	1-WMO-753	ESSENTIAL SERVICE WATER TO TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 SHUTOFF VALVE	CLOSED	OPEN	Local Manual Operation at the operator hand wheel is credited for FLEX Response
235	1-WRV-762	WEST ESW PUMP PP-7W DISCH STN EAST BASKET B/W OUT SHUTOFF VALVE	OPEN/ CLOSED	CLOSED	Valve Fails Closed on Loss of Air (Its Desired FLEX Position)
236	1-WRV-767	W ESW PUMP PP-7W DISCH STN EAST BASKET B/W INLET SHUTOFF VALVE	OPEN/ CLOSED	CLOSED	Valve Fails Closed on Loss of Air (Its Desired FLEX Position)
237	1-WRV-772	W ESW PUMP PP-7W DISCH STN WEST BASKET B/W OUTLET SHUTOFF VALVE	OPEN/ CLOSED	CLOSED	Valve Fails Closed on Loss of Air (Its Desired FLEX Position)
238	1-WRV-777	W ESW PUMP PP-7W DISCH STN WEST BASKET B/W INLET SHUTOFF VALVE	OPEN/ CLOSED	CLOSED	Valve Fails Closed on Loss of Air (Its Desired FLEX Position)
239	1-XRV-152	BACKUP AIR TO NRV-152 PRESSURE REGULATOR	NOT USED	REGULATING	
240	1-XRV-153	BACKUP AIR TO NRV-153 PRESSURE REGULATOR	NOT USED	REGULATING	

Attachment B –CNP Unit 2 ESEL

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
1	12-TK-47-AB	AB EMERGENCY DIESEL FUEL OIL STORAGE TANK	N/A	N/A	Passive Component
2	2-152-LDISB	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES BACKUP SUPPLY BREAKER	ENERGIZED	ENERGIZED	
3	2-152-UDISB	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES BACKUP SUPPLY BREAKER	ENERGIZED	ENERGIZED	
4	2-21A	600V BUS 21A SWITCHGEAR	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
5	2-21B	600V BUS 21B SWITCHGEAR	ENERGIZED	ENERGIZED	
6	2-21C	600V BUS 21C SWITCHGEAR	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only, 11C1 Breaker must be manually tripped
7	2-21D	600V BUS 21D SWITCHGEAR	ENERGIZED	ENERGIZED	
8	2-2A	4KV BUS 2A SWITCHGEAR	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
9	2-52-LDISB	CNTMT HYDROGEN IGNITION LOWER VOLUMN TRAIN 'B'GLOW PLUG ASSEMBLIES STARTER COMBO-LDISB CKT BRK	ENERGIZED	ENERGIZED	
10	2-52-UDISB	CNTMT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B'GLOW PLUG ASSEMBLIES STARTER COMBO-UDISB CKT BRK	ENERGIZED	ENERGIZED	
11	2-88X-LDISB	CNTMT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B'GLOW PLUG ASSEMBLIES STARTER COMBO-LDISB STAR CNTR	NOT USED	ENERGIZED	
12	2-88X-UDISB	CNTMT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B'GLOW PLUG ASSEMBLIES STARTER COMBO-UDISB CONTACTOR	NOT USED	ENERGIZED	
13	2-89-ABBC	PLANT BATTERY BATT-AB DISCONNECT SWITCH	ENERGIZED	ENERGIZED	
14	2-89-CDBC	PLANT BATTERY BATT-CD DISCONNECT SWITCH	ENERGIZED	ENERGIZED	
15	2-AB-A	600VAC MOTOR CONTROL CENTER AB-A	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
16	2-AB-D	600VAC MOTOR CONTROL CENTER AB-D	ENERGIZED	ENERGIZED	

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
17	2-ABD-B	600VAC MOTOR CONTROL CENTER ABD-B	ENERGIZED	ENERGIZED	
18	2-ABD-D	600VAC MOTOR CONTROL CENTER ABD-D	ENERGIZED	ENERGIZED	
19	2-ABV-A	600VAC VALVE CONTROL CENTER ABV-A	ENERGIZED	ENERGIZED	
20	2-AFWX	120/208VAC AUXILIARY FEEDWATER DISTRIBUTION PANEL	OPERATING	OPERATING	RCS Level, RWST Level
21	2-AM-A	600VAC MOTOR CONTROL CENTER AM-A	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
22	2-AZV-A	600VAC VALVE CONTROL CENTER AZV-A	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
23	2-BA	BORIC ACID CHARGING AND LETDOWN CONTROL PANEL	OPERATING	OPERATING	BAST Level, BAST Temperature, RCS Injection Flow
24	2-BATT-AB	PLANT BATTERY AB	ENERGIZED	ENERGIZED	
25	2-BATT-AB-SH	PLANT BATTERY BATT-AB AMMETER SHUNT	ENERGIZED	ENERGIZED	
26	2-BATT-CD	PLANT BATTERY CD	ENERGIZED	ENERGIZED	
27	2-BATT-CD-SH	PLANT BATTERY BATT-CD AMMETER SHUNT	ENERGIZED	ENERGIZED	
28	2-BC-AB2	PLANT BATTERY BATT-AB CHARGER #2	ENERGIZED	ENERGIZED	
29	2-BC-CD1	PLANT BATTERY BATT-CD BATTERY CHARGER #1	ENERGIZED	ENERGIZED	
30	2-BCTC-AB	PLANT BATTERY CHARGERS BC-AB1 AND BC-AB2 TRANSFER PANEL	ENERGIZED	ENERGIZED	
31	2-BCTC-CD	PLANT BATTERY CHARGERS BC-CD1 AND BC-CD2 TRANSFER PANEL	ENERGIZED	ENERGIZED	
32	2-BLI-110	STEAM GENERATOR OME-3-1 WIDE RANGE LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	SG Level Transmitter
33	2-BLI-120	STEAM GENERATOR OME-3-2 WIDE RANGE LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	SG Level Transmitter
34	2-BLI-130	STEAM GENERATOR OME-3-3 WIDE RANGE LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	SG Level Transmitter
35	2-BLI-140	STEAM GENERATOR OME-3-4 WIDE RANGE LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	SG Level Transmitter

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
36	2-CCV-AB	250VDC TRAIN 'B' CRITICAL SOLENOID VALVES DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
37	2-CCV-CD	250VDC TRAIN 'A' CRITICAL SOLENOID VALVES DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
38	2-CCW	COMPONENT COOLING WATER CONTROL PANEL	OPERATING	AVAILABLE	Hand Switches powered separately
39	2-CG1-14	REACTOR PROTECTION CONTROL GROUP #1 CABINET #14	OPERATING	OPERATING	SG Level, RCS Injection Flow
40	2-CG1-15	REACTOR PROTECTION CONTROL GROUP #1 CABINET #15	OPERATING	OPERATING	BAST Level Instrumentation
41	2-CG2-17	REACTOR PROTECTION CONTROL GROUP #2 CABINET #17	OPERATING	OPERATING	RCS Injection Flow
42	2-CG2-19	REACTOR PROTECTION CONTROL GROUP #2 CABINET #19	OPERATING	OPERATING	RCS Injection Flow Instrumentation
43	2-CG3-20	REACTOR PROTECTION CONTROL GROUP #3 CABINET #20	OPERATING	OPERATING	RCS Injection Flow
44	2-CG3-21	REACTOR PROTECTION CONTROL GROUP #3 CABINET #21	OPERATING	OPERATING	Containment Pressure, RWST Level, BAST Level, RCS Injection Flow
45	2-CG4-22	REACTOR PROTECTION CONTROL GROUP #4 CABINET #22	OPERATING	OPERATING	RCS Injection Flow
46	2-CG4-23	REACTOR PROTECTION CONTROL GROUP #4 CABINET #23	OPERATING	OPERATING	SG Level
47	2-CLI-114	CONDENSATE STORAGE TANK TK-32 LEVEL INDICATOR TRANSMITTER	OPERATING	OPERATING	CST Level Transmitter
48	2-CMO-413	COMPONENT COOLING WATER PUMPS SUCTION CROSS TIE TRAIN 'B' SHUTOFF VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
49	2-CMO-414	COMPONENT COOLING WATER PUMPS DISCHARGE CROSS TIE TRAIN 'B' SHUTOFF VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
50	2-CMO-416	COMPONENT COOLING WATER TO MISCELLANEOUS SERVICE TRAIN 'B' SHUTOFF VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
51	2-CMO-429	WEST RESIDUAL HEAT REMOVAL HEAT EXCHANGER COMPONENT COOLING WATER OUTLET SHUTOFF VALVE	CLOSED	OPEN	Power Available in Phase 3 Only

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
52	2-CP	CONDENSATE PUMP CONTROL PANEL	OPERATING	OPERATING	CST Level Indicator, Separately Powered
53	2-CRID-1	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL I DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
54	2-CRID-1-INV	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION SYSTEM >	ENERGIZED	ENERGIZED	
55	2-CRID-2	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL II DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
56	2-CRID-2-INV	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION SYSTEM >	ENERGIZED	ENERGIZED	
57	2-CRID-3	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL III DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
58	2-CRID-3-INV	120VAC CONTROL ROOM INSTRUMENTATION DISTRIBUTION >	ENERGIZED	ENERGIZED	
59	2-CRID-4	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL IV DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
60	2-CRID-4-INV	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION SYSTEM >	ENERGIZED	ENERGIZED	
61	2-DTU	DELTA 'T' AND UNIT CONTROL PANEL	OPERATING	OPERATING	RCS Temperature Recorder
62	2-ELSC	EMERGENCY LOCAL INDICATION SHUTDOWN AND COOLDOWN DISTRIBUTION PANEL	ENERGIZED	ENERGIZED	
63	2-EZC-B	600VAC MOTOR CONTROL CENTER EZC-B	ENERGIZED	ENERGIZED	
64	2-EZC-C	600VAC MOTOR CONTROL CENTER EZC-C	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
65	2-EZC-D	600VAC MOTOR CONTROL CENTER EZC-D	ENERGIZED	ENERGIZED	
66	2-FFI-210	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-1 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	AFW Flow Transmitter

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
67	2-FFI-220	AUX FEEDWATER TO SG OME-3-2 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	AFW Flow Transmitter
68	2-FFI-230	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-3 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	AFW Flow Transmitter
69	2-FFI-240	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-4 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	AFW Flow Transmitter
70	2-FI	FIXED INCORE CONTROL PANEL	OPERATING	OPERATING	Core Exit Temperature Recorder
71	2-FICT-A	REACTOR CORE THERMOCOUPLE TRAIN 'A' TRANSMITTER CABINET	OPERATING	OPERATING	Core Exit Temperature
72	2-FLX	FLUX CONTROL PANEL	OPERATING	OPERATING	Neutron Flux Indicator, Separately Powered
73	2-FMO-211	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 DISCHARGETO STEAM GENERATOR OME-3-1 CONTROL VALVE	THROTTLED	THROTTLED	Throttle position will be adjusted during FLEX using the local manual operator hand wheel
74	2-FMO-221	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 DISCHARGETO STEAM GENERATOR OME-3-2 CONTROL VALVE	THROTTLED	THROTTLED	Throttle position will be adjusted during FLEX using the local manual operator hand wheel
75	2-FMO-231	TURBINE DRIVEN AUXILIARY FEED PUMP SUPPLY TO STEAM GENERATOR OME-3-3 CONTROL VALVE	THROTTLED	THROTTLED	Throttle position will be adjusted during FLEX using the local manual operator hand wheel
76	2-FMO-241	TURBINE DRIVEN AUXILIARY FEED PUMP SUPPLY TO STEAM GENERATOR OME-3-4 CONTROL VALVE	THROTTLED	THROTTLED	Throttle position will be adjusted during FLEX using the local manual operator hand wheel
77	2-HE-15W	WEST COMPONENT COOLING WATER HEAT EXCHANGER	N/A	N/A	Passive Component
78	2-HE-17W	WEST RESIDUAL HEAT REMOVAL HEAT EXCHANGER	N/A	N/A	Passive Component
79	2-HSD2	UNIT 2 HOT SHUTDOWN PANEL	ENERGIZED	ENERGIZED	
80	2-HV-ACR-2	CONTROL ROOM AIR CONDITIONING SOUTH LIQUID CHILLER	AS NEEDED	OPERATING	Power Available in Phase 3 Only
81	2-HV-ACRA-2	CONTROL ROOM VENTILATION SOUTH AIR CONDITIONING UNIT	AS NEEDED	OPERATING	Power Available in Phase 3 Only

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
82	2-HV-ACR-DA-2	OUTSIDE AIR TO CONTROL ROOM PRESSURIZATION/ CLEANUP FILTER UNIT HV-ACRF VENT DAMPER #2	AS NEEDED	OPERATING	Power Available in Phase 3 Only
83	2-HV-ACRF	CONTROL ROOM PRESSURIZATION/CLEANUP FILTER UNIT	N/A	N/A	Passive Component
84	2-HV-ACRF-2	CONTROL ROOM PRESSURIZATION/CLEANUP FILTER UNITVENT FAN #2	AS NEEDED	OPERATING	Power Available in Phase 3 Only
85	2-HV-ACR-H2	CONTROL ROOM VENTILATION SOUTH DUCT ELECTRIC HEATER	AS NEEDED	OPERATING	Power Available in Phase 3 Only
86	2-HV-CEQ-2	CONTAINMENT HYDROGEN SKIMMER VENTILATION FAN #2	AS NEEDED	OPERATING	Power Available in Phase 3 Only
87	2-HV-SGRX-5	AB BATTERY EQUIPMENT AREA BATTERY ROOM VENTILATION EXHAUST FAN	AS NEEDED	OPERATING	Battery Room AB Ventilation, Controlled Locally
88	2-HV-SGRX-6	CD BATTERY EQUIPMENT AREA BATTERY ROOM VENTILATION EXHAUST FAN	AS NEEDED	OPERATING	Battery Room CD Ventilation, Controlled Locally
89	2-ICM-111	RHR TO REACTOR COOLANT LOOPS #2 & #3 COLD LEGSCONTAINMENT ISOLATION VALVE	CLOSED	OPEN	Power Available in Phase 3 Only
90	2-ICM-129	REACTOR COOLANT LOOP #2 HOT LEG TO RESIDUAL HEAT REMOVAL PUMPS SUCTION CONTAINMENT ISOLATION VALVE	CLOSED	OPEN	Needs closure of PB 403AX relay permissive, Power Available in Phase 3 Only
91	2-ICM-251	BORON INJECTION TANK TRAIN 'B' OUTLET CONTAINMENT >	CLOSED	OPEN	Power Available in Phase 3 Only
92	2-ICM-321	WEST RHR TO REACTOR COOLANT LOOPS #2 AND #3 COLDLEGS CONTAINMENT ISOLATION VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
93	2-IFI-51	BORON INJECTION TO REACTOR COOLANT LOOP #1 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	RCS Injection Flow Transmitter
94	2-IFI-52	BORON INJECTION TO REACTOR COOLANT LOOP #2 FLOWINDICATOR TRANSMITTER	OPERATING	OPERATING	RCS Injection Flow Transmitter
95	2-IFI-53	BORON INJECTION TO REACTOR COOLANT LOOP #3 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	RCS Injection Flow Transmitter

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
96	2-IFI-54	BORON INJECTION TO REACTOR COOLANT LOOP #4 FLOW INDICATOR TRANSMITTER	OPERATING	OPERATING	RCS Injection Flow Transmitter
97	2-IMO-128	REACTOR COOLANT LOOP #2 HOT LEG TO RESIDUAL HEAT REMOVAL PUMPS SUCTION SHUTOFF VALVE	CLOSED	OPEN	Needs closure of PB 405AX relay permissive
98	2-IMO-256	BORON INJECTION TANK TRAIN 'B' INLET SHUTOFF VALVE	CLOSED	OPEN	Power Available in Phase 3 Only
99	2-IMO-310	EAST RESIDUAL HEAT REMOVAL PUMP PP-35E SUCTION SHUTOFF VALVE	OPEN	CLOSED	Local manual operation with the operator hand wheel is credited for FLEX Response
100	2-IMO-324	WEST RHR HX 2-HE-17W DISCHARGE CROSSTIE SHUTOFF VALVE	CLOSED	OPEN	Local manual operation with the operator hand wheel is credited for FLEX Response
101	2-LDISB-B10	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B10	NOT USED	OPERATING	
102	2-LDISB-B11	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B11	NOT USED	OPERATING	
103	2-LDISB-B12	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B12	NOT USED	OPERATING	
104	2-LDISB-B18	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B18	NOT USED	OPERATING	
105	2-LDISB-B19	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B19	NOT USED	OPERATING	
106	2-LDISB-B20	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B20	NOT USED	OPERATING	
107	2-LDISB-B21	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B21	NOT USED	OPERATING	
108	2-LDISB-B22	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B22	NOT USED	OPERATING	

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
109	2-LDISB-B23	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B23	NOT USED	OPERATING	
110	2-LDISB-B24	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B24	NOT USED	OPERATING	
111	2-LDISB-B25	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B25	NOT USED	OPERATING	
112	2-LDISB-B26	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B26	NOT USED	OPERATING	
113	2-LDISB-B27	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B27	NOT USED	OPERATING	
114	2-LDISB-B28	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B28	NOT USED	OPERATING	
115	2-LDISB-B35	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B35	NOT USED	OPERATING	
116	2-LDISB-B8	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' IGNITER ASSEMBLY #B8	NOT USED	OPERATING	
117	2-LDISB-B9	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B9	NOT USED	OPERATING	
118	2-LSI-1	STEAM GENERATORS #1 AND #4 LOCAL SHUTDOWN STATION	NON-OPERATING (REMOTE)	REMOTE	SG Level Transmitter Transfer Relay, power N/A as de-energized is desired relay state
119	2-LSI-2	STEAM GENERATORS #2 AND #3 LOCAL SHUTDOWN STATION	NON-OPERATING (REMOTE)	REMOTE	SG Level Transmitter Transfer Relay, power N/A as de-energized is desired relay state
120	2-LSI-3	REACTOR COOLANT SYSTEM CHARGING AND LETDOWN LOCAL SHUTDOWN STATION	NON-OPERATING (REMOTE)	REMOTE	NPS-122 RCS Pressure Transmitter Transfer Relay, power N/A as de-energized is desired relay state
121	2-MCAB	250VDC DISTRIBUTION PANEL MCAB	ENERGIZED	ENERGIZED	

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
122	2-MCCD	250VDC DISTRIBUTION POWER PANEL	OPERATING	OPERATING	Various Instruments
123	2-MDAB	250VDC DISTRIBUTION PANEL MDAB	ENERGIZED	ENERGIZED	
124	2-MDCD	250VDC DISTRIBUTION PANEL MDCD	ENERGIZED	ENERGIZED	
125	2-MPP-210	STEAM GENERATOR OME-3-1 CHANNEL I STEAM PRESSURE TRANSMITTER	OPERATING	OPERATING	SG Pressure Transmitter
126	2-MPP-220	STEAM GENERATOR OME-3-2 CHANNEL I STEAM PRESSURE TRANSMITTER	OPERATING	OPERATING	SG Pressure Transmitter
127	2-MPP-230	STEAM GENERATOR OME-3-3 CHANNEL I STEAM PRESSURE TRANSMITTER	OPERATING	OPERATING	SG Pressure Transmitter
128	2-MPP-240	STEAM GENERATOR OME-3-4 CHANNEL I STEAM PRESSURE TRANSMITTER	OPERATING	OPERATING	SG Pressure Transmitter
129	2-MRV-213	STEAM GENERATOR OME-3-1 POWER OPERATED RELIEF VALVE	CLOSED	OPEN	Fail Closed, Local manual operation with the operator hand wheel is credited for FLEX Response to throttle the valve
130	2-MRV-223	STEAM GENERATOR OME-3-2 POWER OPERATED RELIEF VALVE	CLOSED	OPEN	Fail Closed, Local manual operation with the operator hand wheel is credited for FLEX Response to throttle the valve
131	2-MRV-233	STEAM GENERATOR OME-3-3 POWER OPERATED RELIEF VALVE	CLOSED	OPEN	Fail Closed, Local manual operation with the operator hand wheel is credited for FLEX Response to throttle the valve
132	2-MRV-243	STEAM GENERATOR OME-3-4 POWER OPERATED RELIEF VALVE	CLOSED	OPEN	Fail Closed, Local manual operation with the operator hand wheel is credited for FLEX Response to throttle the valve
133	2-NIS-I	NUCLEAR INSTRUMENTATION SYSTEM PROTECTION CHANNEL I CONTROL PANEL	OPERATING	OPERATING	Neutron Flux Indicator, Separately Powered
134	2-NLP-151	PRESSURIZER OME-4 PROTECTION CHANNEL I LEVEL TRANSMITTER	OPERATING	OPERATING	Pressurizer Level Transmitter
135	2-NPS-110	REACTOR VESSEL TRAIN 'A' WIDE RANGE PRESSURE TRANSMITTER	OPERATING	OPERATING	RCS Level, RCS Pressure Transmitter
136	2-NPS-121	REACTOR COOLANT LOOP #2 HOT LEG WIDE RANGE PRESSURE TRANSMITTER	OPERATING	OPERATING	Required for valve ICM-129 pressure permissive

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
137	2-NPS-122	REACTOR COOLANT LOOP #1 HOT LEG WIDE RANGE PRESSURE TRANSMITTER	OPERATING	OPERATING	Required for valve IMO-128 pressure permissive
138	2-NRI-21	NUCLEAR INSTRUMENTATION CHANNEL I WIDE RANGE RADIATION DETECTOR	OPERATING	OPERATING	Neutron Flux
139	2-NRI-21-AMP	NUCLEAR INSTRUMENTATION WIDE RANGE RADIATION AMPLIFIER	OPERATING	OPERATING	Neutron Flux
140	2-NRV-152	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVE	CLOSED	OPEN	Fail Closed
141	2-NRV-153	PRESSURIZER OME-4 TRAIN 'A' PRESSURE RELIEF VALVE	CLOSED	OPEN	Fail Closed
142	2-NTQ-110A	RVLIS TRAIN 'A' UPPER TAP TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'A'	OPERATING	OPERATING	RCS Level Transmitter
143	2-NTQ-110B	RVLIS TRAIN 'A' UPPER TAP TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'B'	OPERATING	OPERATING	RCS Level Transmitter
144	2-NTQ-130A	RVLIS TRAIN 'A' CONDUIT TEMPERATURE COMPENSATION COMPUTER INPUT THERMAL SENSOR 'A'	OPERATING	OPERATING	RCS Level Transmitter
145	2-NTQ-130C	RVLIS TRAIN 'A' CONDUIT TEMPERATURE COMPENSATION COMPUTER INPUT SPARE THERMAL SENSOR 'C'	OPERATING	OPERATING	RCS Level Transmitter
146	2-NTR-110	REACTOR COOLANT LOOP #1 HOT LEG WIDE RANGE TEMPERATURE RECORDER THERMAL SENSOR	OPERATING	OPERATING	RCS Temperature Transmitter
147	2-NTR-130	REACTOR COOLANT LOOP #3 HOT LEG WIDE RANGE TEMPERATURE RECORDER THERMAL SENSOR	OPERATING	OPERATING	RCS Temperature Transmitter, also used for RCS Level (RVLIS)
148	2-NTR-210	REACTOR COOLANT LOOP #1 COLD LEG WIDE RANGE TEMPERATURE RECORDER THERMAL SENSOR	OPERATING	OPERATING	RCS Temperature Transmitter
149	2-NTR-230	REACTOR COOLANT LOOP #3 COLD LEG WIDE RANGE TEMPERATURE RECORDER THERMAL SENSOR	OPERATING	OPERATING	RCS Temperature Transmitter
150	2-OME-33	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 SUCTION >	N/A	N/A	Passive Component

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
151	2-OME-34W	WEST ESSENTIAL SERVICE WATER PUMP PP-7W DISCH STN	OPERATING	OPERATING	Passive component when used in FLEX response
152	2-OME-6-1	ACCUMULATOR TANK #1	N/A	N/A	Passive Component
153	2-OME-6-2	ACCUMULATOR TANK #2	N/A	N/A	Passive Component
154	2-OME-6-3	ACCUMULATOR TANK #3	N/A	N/A	Passive Component
155	2-OME-6-4	ACCUMULATOR TANK #4	N/A	N/A	Passive Component
156	2-PP-10W	WEST COMPONENT COOLING WATER PUMP	N/A	N/A	Power Available in Phase 3 Only
157	2-PP-35W	WEST RESIDUAL HEAT REMOVAL PUMP	N/A	N/A	Power Available in Phase 3 Only
158	2-PP-4	TURBINE DRIVEN AUXILIARY FEED PUMP	STOP	RUN	Via ROB Turbine 1-OME-39
159	2-PP-46-4	BORIC ACID STORAGE TANKS TRANSFER PUMP #4	NOT USED	OPERATING	Pump used for Boration Phase 3 after NSRC Generators installed
160	2-PP-82S	CONTROL ROOM AIR CONDITIONING SOUTH CHILL WATERCIRCULATION PUMP	AS NEEDED	OPERATING	Power Available in Phase 3 Only
161	2-PPA-310	UPPER CONTAINMENT CHANNEL III WIDE RANGE PRESSURE ALARM TRANSMITTER	OPERATING	OPERATING	Containment Pressure Transmitter
162	2-PRZ	PRESSURIZER CONTROL PANEL	OPERATING	OPERATING	Pressurizer level Indicator and Control for Pressurizer Relief Valves
163	2-QLA-430	SOUTH BORIC ACID STORAGE TANK TK-12S LEVEL ALARM TRANSMITTER	OPERATING	OPERATING	BAST Level Transmitter
164	2-QRV-200	CVCS CHARGING TO REGENERATIVE HEAT EXCHANGER FLOWCONTROL VALVE	OPEN	CLOSED	Fails to desired position on loss of instrument air
165	2-QT-506	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 TRIP AND THROTTLE VALVE	CLOSED	OPEN	Local Manual Operation at the operator hand wheel/mechanical trip reset is credited for FLEX Response
166	2-QT-507	AUXILIARY FEED PUMP TURBINE GOVERNOR VALVE	CLOSED	OPERATING	Control via 1-QT-507-KR governor (ROB)
167	2-QTC-430	SOUTH BAST TK-12S TRAIN 'A' HTR TEMP CONTROLLER	OPERATING	OPERATING	BAST Temperature Transmitter
168	2-RHR	RESIDUAL HEAT REMOVAL CONTROL PANEL	OPERATING	AVAILABLE	Hand Switches powered separately
169	2-RPC-1-1	REACTOR PROTECTION CHANNEL I CABINET #1	OPERATING	OPERATING	AFW Flow, Pressurizer level, Pressurizer Relief Valve Control

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
170	2-RPC-1-2	REACTOR PROTECTION CHANNEL I CABINET #2	OPERATING	OPERATING	AFW Flow
171	2-RPC-1-3	REACTOR PROTECTION CHANNEL I CABINET #3	OPERATING	OPERATING	SG Pressure
172	2-RPC-1-4	REACTOR PROTECTION CHANNEL I CABINET #4	OPERATING	OPERATING	SG Pressure
173	2-RPC-2-5	REACTOR PROTECTION CHANNEL II CABINET #5	OPERATING	OPERATING	RWST Level, RCS Pressure Permissive, Pressurizer Relief Valve Control
174	2-RPC-2-6	REACTOR PROTECTION CHANNEL II CABINET #6	OPERATING	OPERATING	AFW Flow, RCS Temperature, RWST Level
175	2-RPC-2-7	REACTOR PROTECTION CHANNEL II CABINET #7	OPERATING	OPERATING	RCS Temperature
176	2-RPC-2-8	REACTOR PROTECTION CHANNEL II CABINET #8	OPERATING	OPERATING	RCS Pressure, RCS Level
177	2-RPC-3-10	REACTOR PROTECTION CHANNEL III CABINET #10	OPERATING	OPERATING	CST Level
178	2-RPC-3-9	REACTOR PROTECTION CHANNEL III CABINET #9	OPERATING	OPERATING	AFW Flow, CST Level, RCS Temperature, RCS Pressure Permissive, Pressurizer Relief Valve Control
179	2-RPC-4-12	REACTOR PROTECTION CHANNEL IV CABINET #12	OPERATING	OPERATING	AFW Flow, Pressurizer Relief Valve Control
180	2-RPS-A	REACTOR PROTECTION AND SAFEGUARD ACTUATIONTRAIN 'A' CABINET	OPERATING	OPERATING	Contains portion of permissive circuit for ICM-129
181	2-RPS-B	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'B' CABINET	OPERATING	OPERATING	Contains portion of permissive circuit for IMO-128
182	2-RPSX-A	REACTOR PROTECTION AND SAFEGUARD ACTUATIONTRAIN 'A' AUXILIARY CABINET	OPERATING	OPERATING	Contains PB 403AX relay permissive
183	2-RPSX-B	REACTOR PROTECTION AND SAFEGUARD ACTUATIONTRAIN 'B' AUXILIARY CABINET	OPERATING	OPERATING	Contains PB 405AX relay permissive
184	2-RVLC	REACTOR VESSEL OME-1 WATER LEVEL INSTRUMENTATION CABINET	OPERATING	OPERATING	RCS Level
185	2-SA	STATION AUXILIARIES CONTROL PANEL	OPERATING	AVAILABLE	Hand Switches powered separately
186	2-SG	STEAM GENERATOR AND AUXILIARY FEED PUMP CONTROL PANEL	OPERATING	OPERATING	AFW Flow, SG Level, and SG Pressure Indicators; Manual Control of Main Steam PORVs - Note that valve position indicator and pressure indicator on valve controllers are not credited. Separate Credited SG Pressure Indicators Must be used.

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
187	2-SIS	SAFETY INJECTION CONTROL PANEL	OPERATING	OPERATING	Control Switches, RCS Pressure Indicator, RCS Level Indicator, All Separately Powered
188	2-SPY	CONTAINMENT SPRAY CONTROL PANEL	OPERATING	OPERATING	Containment Pressure Indicator, RWST Level Recorder
189	2-SSR	ENGINEER SAFETY SYSTEM REAR INSTRUMENT/RELAY RACK	OPERATING	AVAILABLE	Contains 2-CMO-429 AC control relay (powered separately)
190	2-SWR	NUCLEAR INSTRUMENTAL SOURCE RANGE N21INSTRUMENT/RELAY RACK	OPERATING	OPERATING	Neutron Flux Instrumentation
191	2-T21A	4KV BUS T21A SWITCHGEAR	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only, Emergency feed breaker T21A12 must be manually tripped
192	2-TDAB	250VDC TRAIN 'B' TRANSFER CABINET	ENERGIZED	ENERGIZED	
193	2-TDCD	250VDC TRAIN 'A' TRANSFER CABINET	ENERGIZED	ENERGIZED	
194	2-TK-11	BORON INJECTION TANK	N/A	N/A	Passive Component
195	2-TK-12S	SOUTH BORIC ACID STORAGE TANK	N/A	N/A	Passive Component
196	2-TK-253-1	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VALVE NRV-153 RESERVE CONTROL AIR TANK	N/A	N/A	Passive Component
197	2-TK-253-2	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVE NRV-152 RESERVE CONTROL AIR TANK	N/A	N/A	Passive Component
198	2-TK-253-3	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VLV NRV-152 EMERGENCY AIR TANK	N/A	N/A	Passive Component
199	2-TK-253-4	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VLV NRV-153 EMERGENCY AIR TANK	N/A	N/A	Passive Component
200	2-TK-253-5	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVE NRV-152 EMERGENCY AIR TANK	N/A	N/A	Passive Component
201	2-TK-253-6	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VALVE NRV-153 EMERGENCY AIR TANK	N/A	N/A	Passive Component
202	2-TK-253-7	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVE NRV-152 EMERGENCY AIR TANK	N/A	N/A	Passive Component

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
203	2-TK-253-8	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VALVE NRV-153 EMERGENCY AIR TANK	N/A	N/A	Passive Component
204	2-TK-32	CONDENSATE STORAGE TANK	N/A	N/A	Passive Component
205	2-TK-37	COMPONENT COOLING WATER SURGE TANK	N/A	N/A	Passive Component
206	2-TR21A	600V BUS 21A SUPPLY TRANSFORMER	ENERGIZED	ENERGIZED	Power Available in Phase 3 Only
207	2-TR-AFWX	120/208VAC AUXILIARY FEEDWATER DISTRIBUTION PANEL AFWX REGULATING TRANSFORMER	ENERGIZED	ENERGIZED	Regulating Transformer
208	2-TR-ELSC	120/208VAC EMERGENCY LOCAL SHUTDOWN DISTRIBUTION POWER TRANSFORMER	ENERGIZED	ENERGIZED	
209	2-UDISB-B1	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B1	NOT USED	OPERATING	
210	2-UDISB-B13	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B13	NOT USED	OPERATING	
211	2-UDISB-B14	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B14	NOT USED	OPERATING	
212	2-UDISB-B15	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B15	NOT USED	OPERATING	
213	2-UDISB-B16	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B16	NOT USED	OPERATING	
214	2-UDISB-B17	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B17	NOT USED	OPERATING	
215	2-UDISB-B2	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B2	NOT USED	OPERATING	
216	2-UDISB-B29	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B29	NOT USED	OPERATING	

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
217	2-UDISB-B3	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B3	NOT USED	OPERATING	
218	2-UDISB-B30	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B30	NOT USED	OPERATING	
219	2-UDISB-B31	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B31	NOT USED	OPERATING	
220	2-UDISB-B32	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B32	NOT USED	OPERATING	
221	2-UDISB-B33	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B33	NOT USED	OPERATING	
222	2-UDISB-B34	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B34	NOT USED	OPERATING	
223	2-UDISB-B4	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B4	NOT USED	OPERATING	
224	2-UDISB-B5	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B5	NOT USED	OPERATING	
225	2-UDISB-B6	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B6	NOT USED	OPERATING	
226	2-UDISB-B7	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B7	NOT USED	OPERATING	
227	2-VR-LDISB-4	LOWER CONTAINMENT TRAIN B DISTRIBUTED IGNITION SYSTEM VOLTAGE REGULATOR	NOT USED	OPERATING	
228	2-VR-UDISB-3	UPPER CONTAINMENT TRAIN B DISTRIBUTED IGNITION SYSTEM VOLTAGE REGULATOR	NOT USED	OPERATING	

CNP Unit 2 ESEL					
CNP Unit 2 ESEL Item #	Equipment		Operating State		Notes / Comments
	ID	Description	Normal State	Desired State	
229	2-VS	VENTILATION CONTROL PANEL	OPERATING	AVAILABLE	Hand Switches powered separately
230	2-WMO-716	WEST CONTAINMENT SPRAY HEAT EXCHANGER ESSENTIAL SERVICE WATER INLET SHUTOFF VALVE	OPEN	CLOSED	Local Manual Operation at the operator hand wheel is credited for FLEX Response
231	2-WMO-753	EMERGENCY ESSENTIAL SERVICE WATER SUPPLY TO TDAFP PP-4 SHUTOFF VALVE	CLOSED	OPEN	Local Manual Operation at the operator hand wheel is credited for FLEX Response
232	2-WRV-764	W ESW PUMP PP-7W DISCH STN WEST BASKET B/W OUT S/OVALVE	OPEN/ CLOSED	CLOSED	Valve Fails Closed on Loss of Air; Its FLEX Position
233	2-WRV-769	W ESW PUMP PP-7W DISCH STN WEST BASKET B/W INL S/O VALVE	OPEN /CLOSED	CLOSED	Valve Fails Closed on Loss of Air; Its FLEX Position
234	2-WRV-774	WEST ESW PUMP PP-7W DISCH STN EAST BASKET B/W OUT SHUTOFF VALVE	OPEN/ CLOSED	CLOSED	Valve Fails Closed on Loss of Air; Its FLEX Position
235	2-WRV-779	WEST ESW PUMP PP-7W DISCH STN EAST BASKET B/W INLSHUTOFF VALVE	OPEN/ CLOSED	CLOSED	Valve Fails Closed on Loss of Air; Its FLEX Position
236	2-XRV-152	BACKUP AIR TO NRV-152 PRESSURE REGULATOR	NOT USED	REGULATING	
237	2-XRV-153	BACKUP AIR TO NRV-153 PRESSURE REGULATOR	NOT USED	REGULATING	

Attachment C– CNP Unit 1 ESEP HCLPF Values and Failure Mode Tabulation

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
1	1-11A	600VAC BUS 11A SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the switchgear.
2	1-11B	600VAC BUS 11B SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the switchgear.
3	1-11C	600VAC BUS 11C SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the switchgear.
4	1-11D	600VAC BUS 11D SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the switchgear.
5	1-152-LDISB	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES BACKUP SUPPLY BREAKER	Screened	>RLGM	Small panel dimensions of 8" wide, 4" deep, and 14" tall. Mounted to the wall using two unistruts (anchored using four 1/2" expansion bolts).
6	1-152-UDISB	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES BACKUP SUPPLY BREAKER	Screened	>RLGM	Small panel dimensions of 8" wide, 4" deep, and 14" tall. Mounted to the wall using two unistruts (anchored using four 1/2" expansion bolts).
7	1-1A	4KV BUS 1A SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of an existing USI A-46 anchorage evaluation for a similar switchgear.
8	12-QLA-420	MIDDLE BORIC ACID STORAGE TANK TK-12M LEVEL ALARM TRANSMITTER	Seismic Interaction	0.227g	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage rugged by inspection, welded to one of the Boric Acid Storage Tank 12-TK-12M legs. However, the HCLPF for this component is limited by the Boric Acid Storage Tank 12-TK-12M. HCLPF from Ref. 10.2 for the tank is 0.227g < 0.387g (RLGM ZPA).
10	12-TK-12M	MIDDLE BORIC ACID STORAGE TANK	Anchorage	0.227g	The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					Tanks" (Ref. 10.2) is 0.227g that is less than the RLGM of 0.387g.
12	1-52-LDISB	CNTMT HYDROGEN IGNITION LOWER VOLUMN TRAIN 'B' GLOW PLUG ASSEMBLIES STARTER COMBO-LDISB CKT BRK	Screened	>RLGM	Small panel dimensions of 9" wide, 20" tall, and 6" deep. Equipment mounted on two horizontal running unistruts spaced at 19". Unistrut anchors are 1/2" expansion bolts spaced at 41" plus an additional two 3/8" bolts located 29". Screened based on the light panel with rugged anchorage.
13	1-52-UDISB	CNTMT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES STARTER COMBO-UDISB CKT BRK	Screened	>RLGM	Small panel dimensions of 9" wide, 20" tall, and 6" deep. Equipment mounted on two horizontal running unistruts spaced at 19". Unistrut anchors are 1/2" expansion bolts spaced at 41" plus an additional two 3/8" bolts located 29". Screened based on the light panel with rugged anchorage.
14	1-88X-LDISB	CNTMT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES STARTER COMBO-LDISB STAR CNTR	Screened	>RLGM	Small panel dimensions of 9" wide, 20" tall, and 6" deep. Equipment mounted on two horizontal running unistruts spaced at 19". Unistrut anchors are 1/2" expansion bolts spaced at 41" plus an additional two 3/8" bolts located 29". Screened based on the light panel with rugged anchorage.
15	1-88X-UDISB	CNTMT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES STARTER COMBO-UDISB CONTACTOR	Screened	>RLGM	Small panel dimensions of 9" wide, 20" tall, and 6" deep. Equipment mounted on two horizontal running unistruts spaced at 19". Unistrut anchors are 1/2" expansion bolts spaced at 41" plus an additional two 3/8" bolts located 29". Screened based on the light panel with rugged anchorage.
16	1-89-ABBC	PLANT BATTERY BATT-AB DISCONNECT SWITCH	Screened	>RLGM	Panel dimensions of 48"x24"x10". Equipment is bolted to two horizontal unistruts, which are bolted to the wall. Panel meets all IEEE 344-75 testing requirements. The testing TRS greatly exceeds the RRS at the floor level. Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage acceptable for RLGM based on similar panels had very high calculated margins for the Design Basis Earthquake.
17	1-89-CDBC	PLANT BATTERY BATT-CD DISCONNECT SWITCH	Screened	>RLGM	Panel dimensions of 48"x24"x10". Equipment is bolted to two horizontal unistruts, which are bolted to the wall. Panel meets all IEEE 344-75 testing requirements. The testing TRS greatly exceeds the RRS at the floor level.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage acceptable for RLGM based on similar panels had very high calculated margins for the Design Basis Earthquake.
18	1-AB-A	600VAC MOTOR CONTROL CENTER AB-A	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. The 1/4" gap for one anchor was judged acceptable. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
19	1-AB-D	600VAC MOTOR CONTROL CENTER AB-D	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
20	1-ABD-B	600VAC MOTOR CONTROL CENTER ABD-B	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
21	1-ABD-D	600VAC MOTOR CONTROL CENTER ABD-D	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
22	1-ABV-A	600VAC VALVE CONTROL CENTER ABV-A	Seismic Interaction	0.578g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC. The potentially governing Block Wall interaction could not be screened for RLGM based on scaling of existing design basis calculation. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.578g.
23	1-AFWX	120/208VAC AUXILIARY FEEDWATER DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on screening calculation to the RLGM.
24	1-AM-A	600VAC MOTOR CONTROL CENTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		AM-A			NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
25	1-AZV-A	600VAC VALVE CONTROL CENTER AZV-A	Anchorage	0.62g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.62g.
26	1-BA	BORIC ACID CHARGING AND LETDOWN CONTROL PANEL	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Control Board.
27	1-BATT-AB	PLANT BATTERY AB	Anchorage	0.613g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Battery Rack. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.613g.
28	1-BATT-AB-SH	PLANT BATTERY BATT-AB AMMETER SHUNT	Screened	>RLGM	Small panel bolted directly to wall using two horizontal unistruts. Box dimensions of 48.5"x40.5"x8.5". No interactions identified. Also contains 1-BC-AB-SH. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels yielding significant seismic capacity margins.
29	1-BATT-CD	PLANT BATTERY CD	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Battery Rack.
30	1-BATT-CD-SH	PLANT BATTERY BATT-CD AMMETER SHUNT	Screened	>RLGM	Typical of cabinet containing shunts (similar to 1-BATT-AB-SH). Cabinet also contains 1-BC-CD-SH. Equipment screens (other than anchorage) for the 0.8g to 1.2 g

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels yielding significant seismic capacity margins.
31	1-BC-AB2	PLANT BATTERY BATT-AB CHARGER #2	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Battery Charger.
32	1-BC-CD1	PLANT BATTERY BATT-CD CHARGER #1	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Battery Charger.
33	1-BCTC-AB	PLANT BATTERY CHARGERS BC-AB1 AND BC-AB2 TRANSFER PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
34	1-BCTC-CD	PLANT BATTERY CHARGERS BC-CD1 AND BC-CD2 TRANSFER PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
35	1-BLI-110	STEAM GENERATOR OME-3-1 WIDE RANGE LEVEL INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
36	1-BLI-120	STEAM GENERATOR OME-3-2 WIDE RANGE LEVEL INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
37	1-BLI-130	STEAM GENERATOR OME-3-3 WIDE RANGE LEVEL INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
38	1-BLI-140	STEAM GENERATOR OME-3-4 WIDE RANGE LEVEL INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
39	1-CCV-AB	250VDC TRAIN 'B' CRITICAL SOLENOID VALVES DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for this item.
40	1-CCV-CD	250VDC TRAIN 'A' CRITICAL SOLENOID VALVES DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for this item.
41	1-CCW	COMPONENT COOLING WATER CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels within the control room yielding significant seismic capacity margins.
42	1-CG1-14	REACTOR PROTECTION CONTROL GROUP #1 CABINET #14	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
43	1-CG1-15	REACTOR PROTECTION CONTROL GROUP #1 CABINET #15	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
44	1-CG2-17	REACTOR PROTECTION CONTROL GROUP #2 CABINET #17	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
45	1-CG2-19	REACTOR PROTECTION CONTROL GROUP #2 CABINET #19	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
46	1-CG3-20	REACTOR PROTECTION CONTROL GROUP #3 CABINET #20	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
47	1-CG3-21	REACTOR PROTECTION CONTROL GROUP #3 CABINET #21	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
48	1-CG4-22	REACTOR PROTECTION CONTROL GROUP #4 CABINET #22	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
49	1-CG4-23	REACTOR PROTECTION CONTROL GROUP #4 CABINET #23	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
50	1-CLI-114	CONDENSATE STORAGE TANK TK-32 LEVEL INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this equipment.
51	1-CMO-413	COMPONENT COOLING WATER PUMPS SUCTION CROSS TIE TRAIN 'B' SHUTOFF VALVE	Screened	>RLGM	This valve is within Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. Therefore, valve is screened for 0.8g to 1.2 g screening lane in EPRI NP-6041-SL.
52	1-CMO-414	COMPONENT COOLING WATER PUMPS DISCHARGE CROSS TIE TRAIN 'B' SHUTOFF VALVE	Screened	>RLGM	This valve is within Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. Therefore, valve is screened for 0.8g to 1.2 g screening lane in EPRI NP-6041-SL.
53	1-CMO-416	COMPONENT COOLING WATER TO MISCELLANEOUS SERVICE TRAIN 'B' SHUTOFF VALVE	Screened	>RLGM	This valve is within Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. Therefore, valve is screened for 0.8g to 1.2 g screening lane in EPRI NP-6041-SL.
54	1-CMO-429	WEST RESIDUAL HEAT REMOVAL HEAT EXCHANGER COMPONENT COOLING WATER OUTLET SHUTOFF VALVE	Screened	>RLGM	This valve is within Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. Therefore, valve is screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
55	1-CP	CONDENSATE PUMP CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels within the control room yielding significant seismic capacity margins.
56	1-CRID-1	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL I	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		DISTRIBUTION PANEL			46 anchorage evaluation of panel 1-ERR, which governs the capacity of this item.
57	1-CRID-1-INV	120VAC CONTROL ROOM INSTRUMENTATION DISTRIBUTION SYSTEM CHANNEL 1 INVERTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.839g and therefore did not control screening.
58	1-CRID-2	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL II DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation of panel 1-ERR, which governs the capacity of this item.
59	1-CRID-2-INV	120VAC CONTROL ROOM INSTRUMENTATION DISTRIBUTION SYSTEM CHANNEL 2 INVERTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.839g and therefore did not control screening.
60	1-CRID-3	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL III DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation of panel 1-ERR, which governs the capacity of this item.
61	1-CRID-3-INV	120VAC CONTROL ROOM INSTRUMENTATION DISTRIBUTION SYSTEM CHANNEL 3 INVERTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.839g and therefore did not control screening.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
62	1-CRID-4	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL IV DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation of panel 1-ERR, which governs the capacity of this item.
63	1-CRID-4-INV	120VAC CONTROL ROOM INSTRUMENTATION DISTRIBUTION SYSTEM CHANNEL 4 INVERTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.839g and therefore did not control screening.
64	1-DTU	DELTA 'T' AND UNIT CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-NP-6041-SL. Anchorage screens to the RLGM input based on similar panels within the control room yielding significant seismic capacity margins.
65	1-ELSC	120/208VAC EMERGENCY LOCAL SHUTDOWN DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels yielding significant seismic capacity margins.
66	1-EZC-B	600VAC MOTOR CONTROL CENTER EZC-B	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation of this MCC.
67	1-EZC-C	600VAC MOTOR CONTROL CENTER EZC-C	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation of this MCC.
68	1-EZC-D	600VAC MOTOR CONTROL CENTER EZC-D	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation of this MCC.
69	1-FFI-210	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-1 FLOW	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Flow transmitter is a small, light-weight (27 lb.) component. Mounted to

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		INDICATOR TRANSMITTER			the wall using two 1/2" expansion bolts, equipment bolted to 2" pipe, 7" out from the wall and approximately 4" up. Transmitter is IEEE-344-1975 qualified. Anchorage screens based on light weight component with rugged anchorage.
70	1-FFI-220	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-2 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Flow transmitter is a small, light-weight (27 lb.) component. Mounted on a u-shaped pipe frame which is welded to steel column (box structure) on both sides. Anchorage screens based on light weight component with rugged anchorage.
71	1-FFI-230	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-3FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Flow transmitter is a small, light-weight (27 lb.) component. Mounted on a u-shaped pipe frame which is welded to steel column (box structure) on both sides. Transmitter is IEEE-344-1975 qualified. Anchorage screens based on light weight component with rugged anchorage.
72	1-FFI-240	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-4 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Flow transmitter is a small, light-weight (27 lb.) component. It is mounted on a L-shaped pipe frame (2" pipe, 7" out from the wall and approximately 13" up) with 2 1/2" bolts mounted to the wall with two expansion anchors. Anchorage screens based on the light weight and the rugged anchorage.
73	1-FI	FIXED INCORE CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels within the control room yielding significant seismic capacity margins.
74	1-FICT-A	REACTOR CORE THERMOCOUPLE TRAIN 'A' TRANSMITTER CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on a screening calculation.
75	1-FLX	FLUX CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					NP-6041-SL. Anchorage screens to the RLGM input based on similar panels within the control room yielding significant seismic capacity margins.
80	1-HE-15W	WEST COMPONENT COOLING WATER HEAT EXCHANGER	Anchorage	0.547g	Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the HX. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.547g.
81	1-HE-17W	WEST RESIDUAL HEAT REMOVAL HEAT EXCHANGER	Screened	>RLGM	Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation of this HX without top braces; braces were installed after the evaluation and provide substantial support.
82	1-HSD1	UNIT 1 HOT SHUTDOWN PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels within the control room yielding significant seismic capacity margins. The potentially governing Block Wall interaction could not be screened for RLGM based on scaling of existing design basis calculation. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 2.682g and therefore did not control screening.
83	1-HV-ACR-2	CONTROL ROOM AIR CONDITIONING SOUTH LIQUID CHILLER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Chiller on vibration isolators, later modified to be restrained in all directions. Anchorage screened to a level greater than the RLGM by scaling the design basis anchorage calculation. The potentially governing Block Wall interaction could not be screened for RLGM based on scaling of existing design basis calculation. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 1.215g and

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					therefore did not control screening.
84	1-HV-ACRA-2	CONTROL ROOM VENTILATION SOUTH AIR CONDITIONING UNIT	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this item. The potentially governing Block Wall interaction could not be screened for RLGM based on scaling of existing design basis calculation. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 1.215g and therefore did not control screening.
85	1-HV-ACR-DA-2	OUTSIDE AIR TO CONTROL ROOM PRESSURIZATION/CLEANUP FILTER UNIT HV-ACRF VENT DAMPER	Screened	>RLGM	Damper included on HVAC duct work, equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. A CNP analysis of the duct work and supporting rod hangers indicates a large margin and therefore screens for the RLGM input.
86	1-HV-ACRF	CONTROL ROOM PRESSURIZATION/CLEANUP FILTER UNIT	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar filter anchorage with significant seismic capacity margins. The potentially governing Block Wall interaction could not be screened for RLGM based on scaling of existing design basis calculation. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 1.215g and therefore did not control screening.
87	1-HV-ACRF-2	CONTROL ROOM PRESSURIZATION/CLEANUP FILTER UNIT VENT FAN #2	Screened	>RLGM	This equipment item is included in the existing USI A-46 evaluation for 1-HV-ACRA-2. This equipment item screens (see 1-HV-ACRA-2 for details).
88	1-HV-ACR-H2	CONTROL ROOM VENTILATION SOUTH DUCT ELECTRIC HEATING UNIT	Screened	>RLGM	Heater included on HVAC duct work and screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. A CNP analysis of the duct work and supporting rod hangers indicates a large margin and therefore screens for the RLGM input.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
90	1-HV-SGRX-5	AB BATTERY EQUIPMENT AREA BATTERY ROOM VENTILATION	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Fan hung from ceiling, in vertical alignment; fan weighs 360 lbs. Anchorage screens due to relatively small fan with rugged anchorage.
91	1-HV-SGRX-6	CD BATTERY EQUIPMENT AREA BATTERY ROOM VENTILATION	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Fan bolted to floor with 8- 1/2" expansion bolts that are adequately embedded; fan weighs 500 lbs. Anchorage screens due to relatively small fan with rugged anchorage.
92	1-ICM-111	RHR TO REACTOR COOLANT LOOPS #2 & #3 COLD LEGS >	Screened	>RLGM	This valve is within Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. Therefore, valve is screened for 0.8g to 1.2 g screening lane in EPRI NP-6041-SL.
93	1-ICM-129	REACTOR COOLANT LOOP #2 HOT LEG TO RESIDUAL HEATREMOVAL PUMPS SUCTION CONTAINMENT ISOLATION VALVE	Screened	>RLGM	This valve is within Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. Therefore, valve is screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
94	1-ICM-251	BORON INJECTION TANK TRAIN 'B' OUTLET CONTAINMENT ISOLATION VALVE	Screened	>RLGM	The weight of this valve is outside the Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. A 3g analysis was performed resulting in acceptable stresses. Therefore, valve is screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
96	1-IFI-51	BORON INJECTION TO REACTOR COOLANT LOOP #1 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL based on light weight component with rugged anchorage.
97	1-IFI-52	BORON INJECTION TO REACTOR COOLANT LOOP #2 FLOWINDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL based on light weight component with rugged anchorage.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
98	1-IFI-53	BORON INJECTION TO REACTOR COOLANT LOOP #3 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL based on light weight component with rugged anchorage.
99	1-IFI-54	BORON INJECTION TO REACTOR COOLANT LOOP #4 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL based on light weight component with rugged anchorage.
100	1-IMO-128	REACTOR COOLANT LOOP #2 HOT LEG TO RESIDUAL HEATREMOVAL PUMPS SUCTION SHUTOFF VALVE	Screened	>RLGM	This valve is within Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. Therefore, valve is screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
101	1-IMO-256	BORON INJECTION TANK TRAIN 'B' INLET SHUTOFF VALVE	Screened	>RLGM	The weight of this valve is outside the Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. A 3g analysis was performed resulting in acceptable stresses. Therefore, valve is screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL. A potential Block Wall interaction was screened for RLGM based on scaling of existing design basis calculation.
102	1-IMO-310	EAST RESIDUAL HEAT REMOVAL PUMP PP-35E SUCTION SHUTOFF VALVE	Seismic Interaction	0.428g	This valve is within the Earthquake Experience Data Base (Fig. F-26) in EPRI 6041-SL. Therefore, valve is screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL. The potentially governing Block Wall interaction could not be screened for RLGM based on scaling of existing design basis calculation. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.428g.
103	1-IMO-324	WEST RHR HX 1-HE-17W DISCHARGE CROSSTIE SHUTOFF VALVE	Screened	>RLGM	This valve is within the Earthquake Experience Data Base (Fig. F-26) in EPRI NP-6041-SL. Therefore, valve is screened for 0.8g to 1.2g screening lane in EPRI NP-

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					6041-SL.
104	1-LDISB-B19	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B19	Screened	>RLGM	The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. The components within the igniter box are not fragile and are encompassed by the Earthquake Experience Data Base of EPRI NP-6041-SL. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Equipment supported by unistrut cantilevered off the containment wall. Anchorage screened for RLGM based on scaling existing anchorage evaluation.
105	1-LDISB-B20	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B20	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM.
106	1-LDISB-B21	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B21	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM.
107	1-LDISB-B22	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B22	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM.
108	1-LDISB-B23	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B23	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM.
109	1-LDISB-B24	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B24	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
110	1-LDISB-B25	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B25	Screened	>RLGM	Equipment supported by unistrut cantilevered off column. See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
111	1-LDISB-B26	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B26	Screened	>RLGM	Equipment supported by unistrut cantilevered off column. See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
112	1-LDISB-B27	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B27	Screened	>RLGM	Equipment supported by unistrut cantilevered off column. See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
113	1-LDISB-B28	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B28	Screened	>RLGM	Equipment supported by unistrut cantilevered off column, the equipment is approximately 20 ft. above the viewing location. See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
114	1-LDISB-B29	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B29	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
115	1-LDISB-B30	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B30	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
116	1-LDISB-B31	CONTAINMENT HYDROGEN IGINTION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B31	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
117	1-LDISB-B32	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B32	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
118	1-LDISB-B33	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B33	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
119	1-LDISB-B34	CONTAINMENT HYDROGEN IGNITION	Screened	>RLGM	See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B34			EPRI NP-6041-SL and anchorage loadings for RLGM
120	1-LDISB-B35	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B35	Screened	>RLGM	Equipment bolted to unistrut, which is cantilevered off column 13 of quad 4, the unistrut is welded to this column. See notes for 1-LDISB-B19. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM
121	1-LSI-1	STEAM GENERATORS #1 AND #4 LOCAL SHUTDOWN STATION	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this panel.
122	1-LSI-2	STEAM GENERATORS #2 AND #3 LOCAL SHUTDOWN STATION	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this panel.
123	1-LSI-3	REACTOR COOLANT SYSTEM CHARGING AND LETDOWN LOCAL SHUTDOWN STATION	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this panel.
124	1-MCAB	250VDC DISTRIBUTION PANEL MCAB	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this panel.
125	1-MCCD	250VDC DISTRIBUTION POWER PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this panel.
126	1-MDAB	250VDC DISTRIBUTION PANEL MDAB	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this panel.
127	1-MDCD	250VDC DISTRIBUTION PANEL MDCD	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this panel.
128	1-MPP-210	STEAM GENERATOR OME-3-1 CHANNEL I STEAM PRESSURE TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this transmitter.
129	1-MPP-220	STEAM GENERATOR OME-3-2 CHANNEL I STEAM PRESSURE TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this transmitter.
130	1-MPP-230	STEAM GENERATOR OME-3-3 CHANNEL I STEAM PRESSURE TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this transmitter.
131	1-MPP-240	STEAM GENERATOR OME-3-4 CHANNEL I STEAM PRESSURE TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this transmitter.
132	1-MRV-213	STEAM GENERATOR OME-3-1 POWER OPERATED RELIEFVALVE	Screened	>RLGM	This valve is outside the Earthquake Experience Data Base (Fig. F-25) in EPRI NP-6041-SL. A 3g load analysis was performed, resulting in acceptable stresses. Therefore, valve is screened for 0.8g to 1.2 g screening lane in EPRI 6041-SL.
133	1-MRV-223	STEAM GENERATOR OME-3-2 POWER OPERATED RELIEF VALVE	Screened	>RLGM	This valve is outside the Earthquake Experience Data Base (Fig. F-25) in EPRI NP-6041-SL. A 3g load analysis was performed, resulting in acceptable stresses. Therefore, valve is screened for 0.8g to 1.2 g screening lane in EPRI NP-6041-SL.
134	1-MRV-233	STEAM GENERATOR OME-3-3 POWER OPERATED RELIEF VALVE	Screened	>RLGM	This valve is outside the Earthquake Experience Data Base (Fig. F-25) in EPRI NP-6041-SL. A 3g load analysis was performed, resulting in acceptable stresses. Therefore, valve is screened for 0.8g to 1.2

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					g screening lane in EPRI NP-6041-SL.
135	1-MRV-243	STEAM GENERATOR OME-3-4 POWER OPERATED RELIEFVALVE	Screened	>RLGM	This valve is outside the Earthquake Experience Data Base (Fig. F-25) in EPRI NP-6041-SL. A 3g load analysis was performed, resulting in acceptable stresses. Therefore, valve is screened for 0.8g to 1.2 g screening lane in EPRI 6041-SL.
136	1-NIS-I	NUCLEAR INSTRUMENTATION SYSTEM PROTECTION CHANNEL I CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this panel.
137	1-NLP-151	PRESSURIZER OME-4 PROTECTION CHANNEL I LEVELTRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this transmitter.
138	1-NPS-110	REACTOR VESSEL TRAIN 'A' WIDE RANGE PRESSURE TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. The transmitter is IEEE-344-75 Qualified. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this transmitter.
142	1-NRI-21-AMP	NUCLEAR INSTRUMENTATION WIDE RANGE RADIATION AMPLIFIER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Amplifier. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 1.16g and did not control the capacity.
143	1-NRV-152	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVE	Screened	>RLGM	Equipment is within Earthquake Experience Data (Fig. F-25) of EPRI NP-6041-SL and screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL.
144	1-NRV-153	PRESSURIZER OME-4 TRAIN 'A' PRESSURE RELIEF VALVE	Screened	>RLGM	Equipment is within Earthquake Experience Data (Fig. F-25) of EPRI NP-6041-SL and screens for the 0.8g to 1.2 g screening lane

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					in EPRI NP-6041-SL.
149	1-NTR-110	REACTOR COOLANT LOOP #1 HOT LEG WIDE RANGETEMPERATURE RECORDER THERMAL SENSOR	Screened	>RLGM	The Thermal Sensor is IEEE-344-75 Qualified. Rugged component no seismic interaction concerns. Equipment screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
150	1-NTR-130	REACTOR COOLANT LOOP #3 HOT LEG WIDE RANGETEMPERATURE RECORDER THERMAL SENSOR	Screened	>RLGM	The Thermal Sensor is IEEE-344-75 Qualified. Rugged component no seismic interaction concerns. Equipment screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
151	1-NTR-210	REACTOR COOLANT LOOP #1 COLD LEG WIDE RANGETEMPERATURE RECORDER THERMAL SENSOR	Screened	>RLGM	The Thermal Sensor is IEEE-344-75 Qualified. Rugged component no seismic interaction concerns. Equipment screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
152	1-NTR-230	REACTOR COOLANT LOOP #3 COLD LEG WIDE RANGETEMPERATURE RECORDER THERMAL SENSOR	Screened	>RLGM	The Thermal Sensor is IEEE-344-75 Qualified. Rugged component no seismic interaction concerns. Equipment screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
153	1-OME-33	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 SUCTION STRAINER	Screened	>RLGM	Strainer supported on two 14" wide, 12" deep, and 18" tall concrete pedestals. Equipment bolted to pedestals with four 3/4" anchor bolts, one set of two bolts in each pedestal, spaced at 6" apart. The piping is well supported, the strainer is small relative to the anchorage and therefore, this is screened for the RLGM.
154	1-OME-34W	WEST ESSENTIAL SERVICE WATER PUMP PP-7W DISCH STN	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for similar pump.
155	1-OME-6-1	ACCUMULATOR TANK #1	Screened	>RLGM	Anchorage screened for RLGM input based on screening calculation.
156	1-OME-6-2	ACCUMULATOR TANK #2	Screened	>RLGM	Anchorage screened for RLGM input based on screening calculation.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
157	1-OME-6-3	ACCUMULATOR TANK #3	Screened	>RLGM	Anchorage screened for RLGM input based on screening calculation.
158	1-OME-6-4	ACCUMULATOR TANK #4	Screened	>RLGM	Anchorage screened for RLGM input based on screening calculation.
159	1-PP-10W	WEST COMPONENT COOLING WATER PUMP	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this pump.
160	1-PP-35W	WEST RESIDUAL HEAT REMOVAL PUMP	Seismic Interaction	0.423g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Pump is supported vertically, but free to translate laterally. The Pump screened for RLGM based on existing stress evaluation of this pump and attached lines. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.423g.
161	1-PP-4	TURBINE DRIVEN AUXILIARY FEED PUMP	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this pump.
162	1-PP-46-1	BORIC ACID STORAGE TANKS TRANSFER PUMP #1	Seismic Interaction	0.227g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on robust anchorage for relatively small pump. However, the HCLPF for this component is limited by the Boric Acid Storage Tank 1-TK-12N due to the attached piping. HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "HCLPF Calculations for Screened in ESEP Tanks" (Ref. 10.2) for the tank is 0.227g that is less than the RLGM of 0.387g.
163	1-PP-82S	CONTROL ROOM AIR CONDITIONING SOUTH CHILL WATER CIRCULATION PUMP	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on existing USI A-46 anchorage evaluation for this pump. The

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 1.215g and did not control the capacity.
164	1-PPA-310	UPPER CONTAINMENT CHANNEL III WIDE RANGE PRESSURE ALARM TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on comparison to similar transmitters.
165	1-PRZ	PRESSURIZER CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels within the control room yielding significant seismic capacity margins.
166	1-QLA-410	NORTH BORIC ACID STORAGE TANK TK-12N LEVEL ALARM TRANSMITTER	Seismic Interaction	0.227g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on robust anchorage for small instrument. However, the HCLPF for this component is limited by the Boric Acid Storage Tank 1-TK-12N due to the attached piping. HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "HCLPF Calculations for Screened in ESEP Tanks" (Ref. 10.2) for the tank is 0.227g that is less than the RLGM of 0.387g.
167	1-QRV-200	AIR OPERATED VALVE TO ISOLATE BORON INJECTION PATH	Screened	>RLGM	Equipment is within Earthquake Experience Data (Fig. F-25) of EPRI NP-6041-SL and screens for the 0.8g to 1.2 g screening lane in EPRI 6041-SL.
168	1-QT-506	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 TRIP AND THROTTLE VALVE	Screened	>RLGM	Equipment is within Earthquake Experience Data (Fig. F-26) of EPRI NP-6041-SL and screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL.
169	1-QT-507	AUXILIARY FEED PUMP TURBINE GOVERNOR VALVE	Screened	>RLGM	Equipment is within Earthquake Experience Data (Fig. F-26) of EPRI NP-6041-SL and screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
170	1-QTC-410	NORTH BAST TK-12N TRAIN 'A' HTR TEMP CONTROLLER	Seismic Interaction	0.227g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on robust anchorage for small instrument. However, the HCLPF for this component is limited by the Boric Acid Storage Tank 1-TK-12N due to the attached piping. HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "HCLPF Calculations for Screened in ESEP Tanks" (Ref. 10.2) for the tank is 0.227g that is less than the RLGM of 0.387g.
171	1-RHR	RESIDUAL HEAT REMOVAL CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar panels within the control room yielding significant seismic capacity margins.
172	1-RPC-1-1	REACTOR PROTECTION CHANNEL I CABINET #1	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
173	1-RPC-1-2	REACTOR PROTECTION CHANNEL I CABINET #2	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
174	1-RPC-1-3	REACTOR PROTECTION CHANNEL I CABINET #3	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
175	1-RPC-1-4	REACTOR PROTECTION CHANNEL I CABINET #4	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
176	1-RPC-2-5	REACTOR PROTECTION CHANNEL II CABINET #5	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					significant seismic capacity margins.
177	1-RPC-2-6	REACTOR PROTECTION CHANNEL II CABINET #6	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
178	1-RPC-2-7	REACTOR PROTECTION CHANNEL II CABINET #7	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
179	1-RPC-2-8	REACTOR PROTECTION CHANNEL II CABINET #8	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
180	1-RPC-3-10	REACTOR PROTECTION CHANNEL III CABINET #10	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
181	1-RPC-3-9	REACTOR PROTECTION CHANNEL III CABINET #9	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
182	1-RPC-4-12	REACTOR PROTECTION CHANNEL IV CABINET #12	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
183	1-RPS-A	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'A' CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar panels within the control room yielding significant seismic capacity margins.
184	1-RPS-B	REACTOR PROTECTION AND SAFEGUARD	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		ACTUATION TRAIN 'B' CABINET			RLGM based on similar panels within the control room yielding significant seismic capacity margins.
185	1-RPSX-A	REACTOR PROTECTION AND SAFEGUARD ACTUATIO N TRAIN 'A' AUXILIARY CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
186	1-RPSX-B	REACTOR PROTECTION AND SAFEGUARD ACTUATIO N TRAIN 'B' AUXILIARY CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
187	1-RVLC	REACTOR VESSEL OME-1 WATER LEVEL INSTRUMENTATION CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 – "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 2.682g which does not control capacity.
188	1-SA	STATION AUXILIARIES CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
189	1-SG	STEAM GENERATOR AND AUXILIARY FEED PUMP CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
190	1-SIS	SAFETY INJECTION CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar panels yielding significant seismic capacity margins.
191	1-SPY	CONTAINMENT SPRAY CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					RLGM based on similar panels yielding significant seismic capacity margins.
192	1-SSR	ENGINEER SAFETY SYSTEM REAR INSTRUMENT/RELAY RACK	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
193	1-SWR	NUCLEAR INSTRUMENTAL SOURCE RANGE N21 INSTRUMENT/RELAY RACK	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar equipment within the control room yielding significant seismic capacity margins.
194	1-T11A	4KV BUS T11A SWITCHGEAR	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on anchorage evaluation performed to the RLGM.
195	1-TDAB	250VDC TRAIN 'B' TRANSFER CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar panels yielding significant seismic capacity margins.
196	1-TDCD	250VDC TRAIN 'A' TRANSFER CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar panels yielding significant seismic capacity margins.
197	1-TK-11	BORON INJECTION TANK	Anchorage	0.45g	The Block Wall interaction was screened for RLGM based on scaling of existing design basis calculation. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.45g for the welded connections.
198	1-TK-12N	NORTH BORIC ACID STORAGE TANK	Anchorage	0.227g	The Block Wall interaction was screened for RLGM based on scaling of existing design basis calculation. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.227g. Therefore, this tank does not screen for the RLGM.
199	1-TK-253-1	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VALVE NRV-152 RESERVE CONTROL AIR TANK	Screened	>RLGM	Horizontal tank containing air is well supported in addition to standard saddles. Tank is adequately welded to building steel. Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage judged adequate for RLGM by inspection based on small fan with rugged anchorage.
200	1-TK-253-2	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VALVE NRV-153 RESERVE CONTROL AIR TANK	Screened	>RLGM	Horizontal tank containing air is well supported in addition to standard saddles. Tank is adequately welded to building steel. Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage judged adequate for RLGM by inspection based on small fan with rugged anchorage.
201	1-TK-253-3	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VLV NRV-152 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 1-TK-253-3, -5, &-7 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The tanks are 9" diameter and 56" tall. The air bottles are strapped to framing affixed to the wall by twelve ¾" bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged adequate for RLGM by inspection based on rugged configuration of support.
202	1-TK-253-4	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VLV NRV-153 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 1-TK-253-4, -6, &-8 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The tanks are 9" diameter and 56" tall. The air bottles are strapped to framing affixed to the wall by twelve ¾" bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged adequate for RLGM by inspection based on rugged configuration of support.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
203	1-TK-253-5	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VLV NRV-152 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 1-TK-253-3, -5, &-7 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The tanks are 9" diameter and 56" tall. The air bottles are strapped to framing affixed to the wall by twelve ¾" bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged adequate for RLGM by inspection based on rugged configuration of support.
204	1-TK-253-6	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VLV NRV-153 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 1-TK-253-4, -6, &-8 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The tanks are 9" diameter and 56" tall. The air bottles are strapped to framing affixed to the wall by twelve ¾" bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged adequate for RLGM by inspection based on rugged configuration of support.
205	1-TK-253-7	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VLV NRV-152 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 1-TK-253-3, -5, &-7 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The tanks are 9" diameter and 56" tall. The air bottles are strapped to framing affixed to the wall by twelve ¾" bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged adequate for RLGM by inspection based on rugged configuration of support.
206	1-TK-253-8	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VLV NRV-153 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 1-TK-253-4, -6, &-8 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The tanks are 9" diameter and 56" tall. The air bottles are strapped to framing affixed to the wall by twelve ¾" bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged adequate for RLGM by inspection based on rugged configuration of

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					support.
207	1-TK-32	CONDENSATE STORAGE TANK	Anchorage	0.481g	Rust was found on the strap supports. A HCLPF calculation was performed for the degraded condition. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.481g.
208	1-TK-37	COMPONENT COOLING WATER SURGE TANK	Anchorage	0.447g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage or the adjacent Block Wall could not be screened for RLGM based on scaling the existing calculations. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is for the tank and is 0.447g due to the anchor bolts.
209	1-TR11A	600VAC BUS 11A SUPPLY TRANSFORMER	Screened	>RLGM	This transformer was purchased to the IEEE 344-75 standard. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 – "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 1.270g and did not control the capacity.
210	1-TR-AFWX	TRANSFORMER FOR AFWX DIST PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
211	1-TR-ELSC	TRANSFORMER FOR ELSC DIST PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
212	1-UDISB-B1	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B1	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. The components within the igniter box are not fragile and are encompassed by that typically contained in other electrical boxes. Therefore, it is determined that the screening lanes contained in EPRI NP-6041-SL are applicable to this equipment. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling existing anchorage evaluation.
213	1-UDISB-B10	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B10	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 1-UDISB-B1.
214	1-UDISB-B11	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B11	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 1-UDISB-B1.
215	1-UDISB-B12	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B12	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 1-UDISB-B1.
216	1-UDISB-B13	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B13	Screened	>RLGM	Igniter box is bolted to two vertical unistruts which are U-bolted to the top and bottom handrail of the catwalk. The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. The igniters attached to the catwalk. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not control capacity.
217	1-UDISB-B14	CONTAINMENT HYDROGEN IGNITION	Screened	>RLGM	Igniter box is bolted to two vertical unistrut that are U-bolted to the top and bottom

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B14			handrail of the catwalk. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not control capacity.
218	1-UDISB-B15	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B15	Screened	>RLGM	Igniter box is bolted to two vertical unistruts which are U-bolted to the top and bottom handrail of the catwalk. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not control capacity.
219	1-UDISB-B16	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B16	Screened	>RLGM	Igniter box is bolted to two vertical unistruts which are U-bolted to the top and bottom handrail of the catwalk. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not control capacity.
220	1-UDISB-B17	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B17	Screened	>RLGM	Igniter box is bolted to two vertical unistruts which are U-bolted to the top and bottom handrail of the catwalk. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs" (Ref. 10.3) is 0.86g and did not control capacity.
221	1-UDISB-B18	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B18	Screened	>RLGM	Igniter box is bolted to two vertical unistruts which are U-bolted to the top and bottom handrail of the catwalk. See notes for 1-UDISB-B13 for screening. The governing HCLPF capacity for the catwalk according to

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs" (Ref. 10.3) is 0.86g and did not control capacity.
222	1-UDISB-B2	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B2	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 1-UDISB-B1 for screening.
223	1-UDISB-B3	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B3	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 1-UDISB-B1 for screening.
224	1-UDISB-B4	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B4	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 1-UDISB-B1 for screening.
225	1-UDISB-B5	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B5	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 1-UDISB-B1 for screening.
226	1-UDISB-B6	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B6	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 1-UDISB-B1 for screening.
227	1-UDISB-B7	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B7	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 1-UDISB-B1 for screening.
228	1-UDISB-B8	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B8	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 1-UDISB-B1 for screening.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
229	1-UDISB-B9	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B9	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 1-UDISB-B1 for screening.
230	1-VR-LDISB-4	LOWER CONTAINMENT TRAIN B DISTRIBUTED IGNITION SYSTEM VOLTAGE REGULATOR	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004– "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.760g and did not control the capacity.
231	1-VR-UDISB-3	UPPER CONTAINMENT TRAIN B DISTRIBUTED IGNITION SYSTEM VOLTAGE REGULATOR	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004– "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.760g and did not control the capacity.
232	1-VS	VENTILATION CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels within the control room yielding significant seismic capacity margins.
233	1-WMO-715	WEST CONTAINMENT SPRAY HEAT EXCHANGER 1-HE-18W ESSENTIAL SERVICE WATER INLET SHUTOFF VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
234	1-WMO-753	ESSENTIAL SERVICE WATER TO TURBINE DRIVENAUXILIARY FEED PUMP PP-4 SHUTOFF VALVE	Screened	>RLGM	This valve falls outside the Earthquake Experience Database from EPRI NP-6041-SL. However, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL based on analysis performed to 3g input.

CNP Unit 1 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
235	1-WRV-762	WEST ESW PP PP-7W DISCH STN EAST BASKET B/W OUT S/O VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
236	1-WRV-767	W ESW PUMP PP-7W DISCH STN EAST BASKET B/W INLET >	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
237	1-WRV-772	W ESW PUMP PP-7W DISCH STN WEST BASKET B/W OUTLET >	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
238	1-WRV-777	W ESW PUMP PP-7W DISCH STN WEST BASKET B/W INLET >	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. There is sufficient clearance between the valve operator and the walkway. Pipe line well supported and not a credible damaging interaction.
239	1-XRV-152	PRESSURE REGULATING VALVE	Screened	>RLGM	Small valve bolted into a small rack. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
240	1-XRV-153	PRESSURE REGULATING VALVE	Screened	>RLGM	Small valve bolted into a small rack. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.

Attachment D –CNP Unit 2 ESEP HCLPF Values and Failure Mode Tabulation

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
2	2-152-LDISB	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES BACKUP SUPPLY BREAKER	Screened	>RLGM	Small panel dimensions of 8" wide, 4" deep, and 14" tall. Equipment mounted to the wall using two unistruts anchored with four ½" expansion bolts. Unistrut anchors are spaced at 46" horizontally and 9" vertically. Unistrut anchorage shared by 2-152-UDISB. Screened based on the light panel with rugged anchorage.
3	2-152-UDISB	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES BACKUP SUPPLY BREAKER	Screened	>RLGM	Small panel dimensions of 8" wide, 4" deep, and 14" tall. Equipment mounted to the wall using two unistruts anchored with four ½" expansion bolts. Unistrut anchors are spaced at 46" horizontally and 9" vertically. Unistrut anchorage shared by 2-152-LDISB. Screened based on the light panel with rugged anchorage.
4	2-21A	600V BUS 21A SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the switchgear.
5	2-21B	600V BUS 21B SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the switchgear.
6	2-21C	600V BUS 21C SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the switchgear.
7	2-21D	600V BUS 21D SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the switchgear.
8	2-2A	4KV BUS 2A SWITCHGEAR	Screened	>RLGM	Meets EPRI NP-6041-SL Table 2.4 caveats. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for a similar switchgear.
9	2-52-LDISB	CNTMT HYDROGEN IGNITION LOWER VOLUMN TRAIN 'B' GLOW PLUG ASSEMBLIES STARTER COMBO-LDISB CKT	Screened	>RLGM	Small panel dimensions of 9" wide, 20" tall, and 6" deep. Equipment mounted on two horizontal running unistruts spaced at 19". Unistrut anchors are 1/2" expansion bolts spaced at 41". Unistruts are shared by 2-52-UDISB. Screened based on the light panel

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		BRK			with rugged anchorage.
10	2-52-UDISB	CNTMT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES STARTER COMBO-UDISB CKT BRK	Screened	>RLGM	Small panel dimensions of 9" wide, 20" tall, and 6" deep. Equipment mounted on two horizontal running unistruts spaced at 19". Unistrut anchors are 1/2" expansion bolts spaced at 41". Unistruts are shared by 2-52-LDISB. Screened based on the light panel with rugged anchorage.
11	2-88X-LDISB	CNTMT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES STARTER COMBO-LDISB STAR CNTR	Screened	>RLGM	Small panel dimensions of 9" wide, 20" tall, and 6" deep. Equipment mounted on two horizontal running unistruts spaced at 19". Unistrut anchors are 1/2" expansion bolts spaced at 41" plus an additional two 3/8" bolts located 29". Screened based on the light panel with rugged anchorage.
12	2-88X-UDISB	CNTMT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLIES STARTER COMBO-UDISB CONTACTOR	Screened	>RLGM	Small panel dimensions of 9" wide, 20" tall, and 6" deep. Equipment mounted on two horizontal running unistruts spaced at 19". Unistrut anchors are 1/2" expansion bolts spaced at 41" plus an additional two 3/8" bolts located 29". Screened based on the light panel with rugged anchorage.
13	2-89-ABBC	PLANT BATTERY BATT-AB DISCONNECT SWITCH	Screened	>RLGM	Panel dimensions of 48"x24"x10". Equipment is bolted to two horizontal unistruts, which are bolted to the wall. Panel meets all IEEE 344-75 testing requirements. The testing TRS greatly exceeds the RRS at the floor level. Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage acceptable for RLGM based on similar panels had very high calculated margins for the Design Basis Earthquake.
14	2-89-CDBC	PLANT BATTERY BATT-CD DISCONNECT SWITCH	Screened	>RLGM	Panel dimensions of 48"x24"x10". Equipment is bolted to two horizontal unistruts, which are bolted to the wall. Panel meets all IEEE 344-75 testing requirements. The testing TRS greatly exceeds the RRS at the floor level. Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage acceptable for RLGM based on similar panels had very high calculated margins for the Design Basis Earthquake.
15	2-AB-A	600VAC MOTOR CONTROL CENTER AB-	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		A			NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
16	2-AB-D	600VAC MOTOR CONTROL CENTER AB-D	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
17	2-ABD-B	600VAC MOTOR CONTROL CENTER ABD-B	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
18	2-ABD-D	600VAC MOTOR CONTROL CENTER ABD-D	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
19	2-ABV-A	600VAC VALVE CONTROL CENTER ABV-A	Seismic Interaction	0.578g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Gaps documented on the Anchor Inspection Data Sheet between the MCC assembly and the grout pad were judged acceptable. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC. The potentially governing Block Wall interaction could not be screened for RLGM based on scaling of existing design basis calculation. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.578g.
20	2-AFWX	120/208VAC AUXILIARY FEEDWATER DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on screening calculation to the RLGM.
21	2-AM-A	600VAC MOTOR CONTROL CENTER AM-A	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. An additional four anchor bolts have been added to supplement original anchorage. Anchorage screened for RLGM based on scaling of existing USI A-46

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					anchorage evaluation for the MCC.
22	2-AZV-A	600VAC VALVE CONTROL CENTER AZV-A	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
23	2-BA	BORIC ACID CHARGING AND LETDOWN CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Control Board.
24	2-BATT-AB	PLANT BATTERY AB	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Battery Rack.
25	2-BATT-AB-SH	PLANT BATTERY BATT-AB AMMETER SHUNT	Screened	>RLGM	Small panel bolted directly to wall using a unistrut. Box dimensions of 48.5"x40.5"x8.5". No interactions identified. Also contains 2-BC-AB-SH. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels yielding significant seismic capacity margins.
26	2-BATT-CD	PLANT BATTERY CD	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Battery Rack.
27	2-BATT-CD-SH	PLANT BATTERY BATT-CD AMMETER SHUNT	Screened	>RLGM	Small panel bolted directly to wall using a unistrut. Box dimensions of 49"x40"x8.5". No interactions identified. Also contains 2-BC-CD-SH. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM input based on similar panels yielding significant seismic capacity margins.
28	2-BC-AB2	PLANT BATTERY BATT-AB CHARGER #2	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Battery Charger.

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
29	2-BC-CD1	PLANT BATTERY BATT-CD BATTERY CHARGER #1	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Battery Charger.
30	2-BCTC-AB	PLANT BATTERY CHARGERS BC-AB1 AND BC-AB2 TRANSFER PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
31	2-BCTC-CD	PLANT BATTERY CHARGERS BC-CD1 AND BC-CD2 TRANSFER PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
32	2-BLI-110	STEAM GENERATOR OME-3-1 WIDE RANGE LEVEL INDICATOR TRANSMITTER	Screened	>RLGM	Equipment bolted directly to wall on small bracket using four 1/2" bolts spaced at 6". Supported on 2x2 tube steel cantilevered out from the wall, equipment support 3" from the wall. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
33	2-BLI-120	STEAM GENERATOR OME-3-2 WIDE RANGE LEVEL INDICATOR TRANSMITTER	Screened	>RLGM	Floor mounted rack seismically qualified to IEEE-344-75. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
34	2-BLI-130	STEAM GENERATOR OME-3-3 WIDE RANGE LEVEL INDICATOR TRANSMITTER	Screened	>RLGM	Mounted to wall using four 1/2" bolts spaced at 6". Cantilevered out from wall approximately 6". Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
35	2-BLI-140	STEAM GENERATOR OME-3-4 WIDE RANGE LEVEL INDICATOR TRANSMITTER	Screened	>RLGM	Equipment bolted directly to wall using four 1/2" bolts spaced at 6". Supported on 2x2 tube steel cantilevered out from the wall, equipment supported 4.5" from the wall. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
36	2-CCV-AB	250VDC TRAIN 'B' CRITICAL SOLENOID VALVES DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the panel.
37	2-CCV-CD	250VDC TRAIN 'A' CRITICAL SOLENOID VALVES DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the panel.
38	2-CCW	COMPONENT COOLING WATER CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar panels within the control room yielding significant seismic capacity margins.
39	2-CG1-14	REACTOR PROTECTION CONTROL GROUP #1 CABINET #14	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar cabinets yielding significant seismic capacity margins.
40	2-CG1-15	REACTOR PROTECTION CONTROL GROUP #1 CABINET #15	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar cabinets yielding significant seismic capacity margins.
41	2-CG2-17	REACTOR PROTECTION CONTROL GROUP #2 CABINET #17	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar cabinets yielding significant seismic capacity margins.

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
42	2-CG2-19	REACTOR PROTECTION CONTROL GROUP #2 CABINET #19	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar cabinets yielding significant seismic capacity margins.
43	2-CG3-20	REACTOR PROTECTION CONTROL GROUP #3 CABINET #20	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar cabinets yielding significant seismic capacity margins.
44	2-CG3-21	REACTOR PROTECTION CONTROL GROUP #3 CABINET #21	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar cabinets yielding significant seismic capacity margins.
45	2-CG4-22	REACTOR PROTECTION CONTROL GROUP #4 CABINET #22	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar cabinets yielding significant seismic capacity margins.
46	2-CG4-23	REACTOR PROTECTION CONTROL GROUP #4 CABINET #23	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar cabinets yielding significant seismic capacity margins.
47	2-CLI-114	CONDENSATE STORAGE TANK TK-32 LEVEL INDICATORTRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
48	2-CMO-413	COMPONENT COOLING WATER PUMPS SUCTION CROSSTIE TRAIN 'B' SHUTOFF VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-NP-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
49	2-CMO-414	COMPONENT COOLING WATER PUMPS DISCHARGE CROSSTIE TRAIN 'B' SHUTOFF VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
50	2-CMO-416	COMPONENT COOLING WATER TO MISCELLANEOUS SERVICE TRAIN 'B' SHUTOFF VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
51	2-CMO-429	WEST RESIDUAL HEAT REMOVAL HEAT EXCHANGER COMPONENT COOLING WATER OUTLET SHUTOFF VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
52	2-CP	CONDENSATE PUMP CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
53	2-CRID-1	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL I DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
54	2-CRID-1-INV	120VAC CONTROL ROOM INSTRUMENTATION DISTRIBUTION SYSTEM CHANNEL 1 INVERTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-004 – "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.839g and therefore did not control the capacity.
55	2-CRID-2	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL II DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
56	2-CRID-2-INV	120VAC CONTROL ROOM INSTRUMENTATION DISTRIBUTION SYSTEM CHANNEL 2 INVERTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-004 – "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.839g and therefore did not control the capacity.
57	2-CRID-3	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL III DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
58	2-CRID-3-INV	120VAC CONTROL ROOM INSTRUMENTATION	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. The governing HCLPF

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		DISTRIBUTION SYSTEM CHANNEL 3 INVERTER			capacity according to S&A Calculation 13Q3208-CAL-004 – "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.839g and therefore did not control the capacity.
59	2-CRID-4	120VAC CONTROL ROOM INSTRUMENT DISTRIBUTION CHANNEL IV DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
59	2-CRID-4-INV	120VAC CONTROL ROOM INSTRUMENTATION DISTRIBUTION SYSTEM CHANNEL 4 INVERTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-004 – "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.839g and therefore did not control the capacity.
61	2-DTU	DELTA 'T' AND UNIT CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
62	2-ELSC	EMERGENCY LOCAL INDICATION SHUTDOWN AND COOLDOWN DISTRIBUTION PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar panels yielding significant seismic capacity margins.
63	2-EZC-B	600VAC MOTOR CONTROL CENTER EZC-B	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
64	2-EZC-C	600VAC MOTOR CONTROL CENTER EZC-C	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
65	2-EZC-D	600VAC MOTOR CONTROL CENTER EZC-D	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the MCC.
66	2-FFI-210	AUXILIARY FEEDWATER TO STEAM GENERATOR	Screened	>RLGM	Bolted directly to wall with four 3/8" bolts. Equipment supported on 2" pipe coming out 7" from the wall and approximately 10" up.

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		OME-3-1FLOW INDICATOR TRANSMITTER			There is a 5" spacing between the two bottom bolts and between the left-most bolts. The top right-most bolt is spaced 10.5" from the top left-most bolt and 5" above the bottom row of bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
67	2-FFI-220	AUX FEEDWATER TO SG OME-3-2 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Supported by 2" pipe, extending 8" out and 24" left. Anchorage mounted on a U-shaped pipe frame, which is then welded to steel column (box structure) on both sides. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
68	2-FFI-230	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-3 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Supported by 2" pipe, extending 8" out and 24" left. Anchorage mounted on a U-shaped pipe frame, which is then welded to steel column (box structure) on both sides. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
69	2-FFI-240	AUXILIARY FEEDWATER TO STEAM GENERATOR OME-3-4 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Equipment mounted to the wall with four 3/8" bolts. Supported on 2" pipe, coming 7.5" out from the wall and 7" up (8" from equipment to the top of vertical pipe). Equipment bolted to pipe with a 4" channel. Minimum spacing of bolts measured to be 5". Anchorage consists of four 3/8" bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
70	2-FI	FIXED INCORE CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					NP-6041-SL. Anchorage screened for RLGM based on similar panels yielding significant seismic capacity margins.
71	2-FICT-A	REACTOR CORE THERMOCOUPLE TRAIN 'A' TRANSMITTER CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on screening calculation to the RLGM.
72	2-FLX	FLUX CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
77	2-HE-15W	WEST COMPONENT COOLING WATER HEAT EXCHANGER	Anchorage	0.547g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. The block wall was far enough away to not be an interaction issue. Anchorage could not be screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Heat Exchanger. Therefore, a HCLPF calculation was performed. The governing HCLPF capacity for the anchorage according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.547g.
78	2-HE-17W	WEST RESIDUAL HEAT REMOVAL HEAT EXCHANGER	Screened	>RLGM	Equipment is supported at the top with brackets in each of the 4 quadrants to resist overturning loads. The bottom is supported by a heavy-duty steel gusset structure supported by two piers. There are two bolts in each pier. Based upon this inspection, the anchorage is adequate for the RLGM spectra.
79	2-HSD2	UNIT 2 HOT SHUTDOWN PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar panels yielding significant seismic capacity margins. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 2.682g and therefore did not control the capacity.

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
80	2-HV-ACR-2	CONTROL ROOM AIR CONDITIONING SOUTH LIQUID CHILLER	Screened	>RLGM	Chiller initially on vibration isolators, however later modified to be restrained in all directions to satisfy GIP outlier resolution. Equipment screens for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened to a level greater than the RLGM by scaling the design basis anchorage calculation.
81	2-HV-ACRA-2	CONTROL ROOM VENTILATION SOUTH AIR CONDITIONING UNIT	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar air conditioning units yielding significant seismic capacity margins.
82	2-HV-ACR-DA-2	OUTSIDE AIR TO CONTROL ROOM PRESSURIZATION/ CLEANUP FILTER UNIT HV-ACRF VENT DAMPER #2	Screened	>RLGM	Damper included on HVAC duct work and screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Duct work screened for RLGM based on existing analysis.
83	2-HV-ACRF	CONTROL ROOM PRESSURIZATION/ CLEANUP FILTER UNIT	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar filter units yielding significant seismic capacity margins. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 1.215g and therefore, did not control the capacity.
84	2-HV-ACRF-2	CONTROL ROOM PRESSURIZATION/ CLEANUP FILTER UNITVENT FAN #2	Screened	>RLGM	The base frame is made of 4x4x3/8 angles, with a height of 21" to the top of the angle frame and an additional 30" to the center of the fan unit. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 1.215g.
85	2-HV-ACR-H2	CONTROL ROOM VENTILATION SOUTH DUCT ELECTRIC HEATER	Screened	>RLGM	Heater included on HVAC duct work and screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Duct work screened for RLGM based on existing analysis.
87	2-HV-SGRX-5	AB BATTERY EQUIPMENT AREA	Screened	>RLGM	Weight of fan is 360 lbs. Fan is hung from ceiling in vertical alignment. Fan anchored to

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		BATTERY ROOM VENTILATION EXHAUST FAN			the shim plate which is anchored to ceiling with sixteen 1/2" bolts into embedded angle in ceiling. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on weight of fan compared to rugged anchorage.
88	2-HV-SGRX-6	CD BATTERY EQUIPMENT AREA BATTERY ROOM VENTILATION EXHAUST FAN	Screened	>RLGM	Weight of fan is judged to be maximum of 500 lbs. Fan is bolted to steel platform which is bolted to the wall on 2 sides and supported by an angle column at the other corner. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on weight of fan compared to rugged anchorage.
90	2-ICM-129	REACTOR COOLANT LOOP #2 HOT LEG TO RESIDUAL HEAT REMOVAL PUMPS SUCTION CONTAINMENT ISOLATION VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
91	2-ICM-251	BORON INJECTION TANK TRAIN 'B' OUTLET CONTAINMENT ISOLATION VALVE	Screened	>RLGM	This valve falls outside the Earthquake Experience Database from EPRI NP-6041-SL. However, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041 based on analysis performed for a 3g input.
93	2-IFI-51	BORON INJECTION TO REACTOR COOLANT LOOP #1 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Anchorage consists of four bolts in a reinforced concrete wall. Two bolts on the left are for an embedded unistrut and two bolts on the right are ½" expansion anchors. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on light rack with rugged anchorage.
94	2-IFI-52	BORON INJECTION TO REACTOR COOLANT LOOP #2 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Rack is light and anchored with four bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on light rack with rugged

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					anchorage.
95	2-IFI-53	BORON INJECTION TO REACTOR COOLANT LOOP #3 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Equipment mounted to wall using two bolts to embedded unistrut. Equipment also U-bolted to the 2" support pipe cantilevered up approximately 14". Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on light rack with rugged anchorage.
96	2-IFI-54	BORON INJECTION TO REACTOR COOLANT LOOP #4 FLOW INDICATOR TRANSMITTER	Screened	>RLGM	Rack is light and anchored to the floor with four bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on light rack with rugged anchorage.
98	2-IMO-256	BORON INJECTION TANK TRAIN 'B' INLET SHUTOFF VALVE	Screened	>RLGM	This valve falls outside the Earthquake Experience Database from EPRI NP-6041-SL. However, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL based on analysis performed for a 3g input. The Block Wall interaction was screened for RLGM based on scaling of existing design basis calculation.
99	2-IMO-310	EAST RESIDUAL HEAT REMOVAL PUMP PP-35E SUCTION SHUTOFF VALVE	Seismic Interaction	0.435g	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.435g.
100	2-IMO-324	WEST RHR HX 2-HE-17W DISCHARGE CROSSTIE SHUTOFF VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
110	2-LDISB-B24	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B24	Screened	>RLGM	The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. All components of the igniter system were seismically mounted to prevent any interference with safety related equipment during and after a design basis seismic event. The components within the igniter box are not fragile and are encompassed by that typically contained in

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					other electrical boxes. Therefore, it is determined that the screening lanes contained in EPRI NP-6041-SL. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling existing anchorage evaluation.
111	2-LDISB-B25	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B25	Screened	>RLGM	Equipment bolted directly to Column 8 of Quad 4. See notes for 2-LDISB-B24. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM.
112	2-LDISB-B26	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B26	Screened	>RLGM	See notes for 2-LDISB-B24. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM.
113	2-LDISB-B27	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B27	Screened	>RLGM	Box bolted to unistruts attached directly to column. See notes for 2-LDISB-B24. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM.
115	2-LDISB-B35	CONTAINMENT HYDROGEN IGNITION LOWER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B35	Screened	>RLGM	Equipment bolted to unistrut, which is welded directly to Column 11. See notes for 2-LDISB-B24. Assembly screened for 0.8g to 1.2g screening lane in EPRI NP-6041-SL and anchorage loadings for RLGM.
118	2-LSI-1	STEAM GENERATORS #1 AND #4 LOCAL SHUTDOWN STATION	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar equipment yielding significant seismic capacity margins.
119	2-LSI-2	STEAM GENERATORS #2 AND #3 LOCAL SHUTDOWN STATION	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar equipment yielding significant seismic capacity margins.
120	2-LSI-3	REACTOR COOLANT SYSTEM CHARGING AND LETDOWN LOCAL SHUTDOWN STATION	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
121	2-MCAB	250VDC DISTRIBUTION PANEL MCAB	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					anchorage evaluation for the panel.
122	2-MCCD	250VDC DISTRIBUTION POWER PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar panels yielding significant seismic capacity margins.
123	2-MDAB	250VDC DISTRIBUTION PANEL MDAB	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar panels yielding significant seismic capacity margins.
124	2-MDCD	250VDC DISTRIBUTION PANEL MDCD	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar panels yielding significant seismic capacity margins.
125	2-MPP-210	STEAM GENERATOR OME-3-1 CHANNEL I STEAM PRESSURE TRANSMITTER	Screened	>RLGM	Equipment is mounted directly to the wall using two 1/2" bolts, spaced at 4.5". Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on light bracket with relatively rugged anchorage.
126	2-MPP-220	STEAM GENERATOR OME-3-2 CHANNEL I STEAM PRESSURE TRANSMITTER	Screened	>RLGM	Equipment is cantilevered from the wall by two 1/2" bolts, and surrounded by an enclosure. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on light bracket with relatively rugged anchorage.
127	2-MPP-230	STEAM GENERATOR OME-3-3 CHANNEL I STEAM PRESSURE TRANSMITTER	Screened	>RLGM	Equipment is supported by two 3/8" bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on light bracket with relatively rugged anchorage.
128	2-MPP-240	STEAM GENERATOR OME-3-4 CHANNEL I STEAM PRESSURE TRANSMITTER	Screened	>RLGM	Equipment bolted directly to wall using two 1/2" bolts spaced at 4.5". Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on light bracket with relatively rugged anchorage.
129	2-MRV-213	STEAM GENERATOR OME-3-1 POWER OPERATED RELIEF	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		VALVE			0.8g to 1.2g screening lane in EPRI NP-6041-SL.
130	2-MRV-223	STEAM GENERATOR OME-3-2 POWER OPERATED RELIEFVALVE	Screened	>RLGM	This valve falls outside the Earthquake Experience Database from EPRI NP-6041-SL. However, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL based on analysis performed to 3g.
131	2-MRV-233	STEAM GENERATOR OME-3-3 POWER OPERATED RELIEFVALVE	Screened	>RLGM	This valve falls outside the Earthquake Experience Database from EPRI NP-6041-SL. However, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL based on analysis performed to 3g.
132	2-MRV-243	STEAM GENERATOR OME-3-4 POWER OPERATED RELIEF VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
133	2-NIS-I	NUCLEAR INSTRUMENTATION SYSTEM PROTECTION CHANNEL I CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar panels yielding significant seismic capacity margins.
134	2-NLP-151	PRESSURIZER OME-4 PROTECTION CHANNEL I LEVEL TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on light rack with rugged anchorage.
135	2-NPS-110	REACTOR VESSEL TRAIN 'A' WIDE RANGE PRESSURE TRANSMITTER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041 based on existing rack qualification for a similar transmitter. The rack is seismically qualified to IEEE-344-75. Anchorage screened for RLGM based on a similar transmitter yielding significant seismic capacity margins.
139	2-NRI-21-AMP	NUCLEAR INSTRUMENTATION WIDE RANGE RADIATION AMPLIFIER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
150	2-OME-33	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 SUCTION STRAINER	Screened	>RLGM	Strainer supported on two 14" wide, 12" deep, and 18" tall concrete pedestals. Equipment bolted to pedestals with four 3/4" anchor bolts, one set of two bolts in each pedestal, spaced at 6" apart. The piping is well supported and the strainer is small

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					relative to the anchorage. Therefore, this equipment is screened for the RLGM.
151	2-OME-34W	WEST ESSENTIAL SERVICE WATER PUMP PP-7W DISCH STN	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar pumps yielding significant seismic capacity margins.
156	2-PP-10W	WEST COMPONENT COOLING WATER PUMP	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on anchor analysis performed to RLGM.
157	2-PP-35W	WEST RESIDUAL HEAT REMOVAL PUMP	Seismic Interaction	0.428g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on similar filter units yielding significant seismic capacity margins. The potentially governing Block Wall interaction could not be screened for RLGM based on scaling of existing design basis calculation. Therefore, a HCLPF calculation was performed. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 - "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.428g.
158	2-PP-4	TURBINE DRIVEN AUXILIARY FEED PUMP	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on anchor analysis performed to RLGM.
159	2-PP-46-4	BORIC ACID STORAGE TANKS TRANSFER PUMP #4	Seismic Interaction	0.227g	The pump weighs 511 lbs. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on the small size of the pump and similar pumps yielding significant seismic capacity margins. The HCLPF is limited by seismic interaction with the piping attached to the Boric Acid Tank. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.227g that is less than the RLGM of 0.387g.

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
160	2-PP-82S	CONTROL ROOM AIR CONDITIONING SOUTH CHILL WATER CIRCULATION PUMP	Screened	>RLGM	The pump weighs 214 lbs. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on the small size of the pump and similar pumps yielding significant seismic capacity margins.
161	2-PPA-310	UPPER CONTAINMENT CHANNEL III WIDE RANGE PRESSURE ALARM TRANSMITTER	Screened	>RLGM	Rack is supported with 2" tube steel anchored to the wall with four plates each employing two 3/8" anchor bolts, and to the floor with one plate employing four 3/8" anchor bolts. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rack with rugged anchorage.
162	2-PRZ	PRESSURIZER CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation for the Panel.
163	2-QLA-430	SOUTH BORIC ACID STORAGE TANK TK-12S LEVEL ALARM TRANSMITTER	Seismic Interaction	0.227g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rack with rugged anchorage. The HCLPF is limited by seismic interaction with the piping attached to the Boric Acid Tank. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.227g, that is less than the RLGM of 0.387g.
164	2-QRV-200	AIR OPERATED VALVE TO ISOLATE BORON INJECTION PATH	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
165	2-QT-506	TURBINE DRIVEN AUXILIARY FEED PUMP PP-4 TRIP ANDTHROTTLE VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
166	2-QT-507	AUXILIARY FEED PUMP TURBINE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		GOVERNOR VALVE			SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
167	2-QTC-430	SOUTH BAST TK-12S TRAIN 'A' HTR TEMP CONTROLLER	Seismic Interaction	0.227g	Equipment welded to one support leg of 2-TK-12S and supported on a 2" pipe cantilevered off the tank leg 15" to the right and 9" up. The support pipe is only welded at the top of the connection located 28" above the top of the concrete pedestal. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rugged configuration of the support. The HCLPF is limited by seismic interaction with the piping attached to the Boric Acid Tank. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.227g that is less than the RLGM of 0.387g.
168	2-RHR	RESIDUAL HEAT REMOVAL CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar panels within the control room yielding significant seismic capacity margins.
169	2-RPC-1-1	REACTOR PROTECTION CHANNEL I CABINET #1	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
170	2-RPC-1-2	REACTOR PROTECTION CHANNEL I CABINET #2	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
171	2-RPC-1-3	REACTOR PROTECTION CHANNEL I CABINET #3	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
172	2-RPC-1-4	REACTOR PROTECTION CHANNEL I CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		#4			RLGM based on similar cabinets yielding significant seismic capacity margins.
173	2-RPC-2-5	REACTOR PROTECTION CHANNEL II CABINET #5	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
174	2-RPC-2-6	REACTOR PROTECTION CHANNEL II CABINET #6	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
175	2-RPC-2-7	REACTOR PROTECTION CHANNEL II CABINET #7	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
176	2-RPC-2-8	REACTOR PROTECTION CHANNEL II CABINET #8	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
177	2-RPC-3-10	REACTOR PROTECTION CHANNEL III CABINET #10	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
178	2-RPC-3-9	REACTOR PROTECTION CHANNEL III CABINET #9	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
179	2-RPC-4-12	REACTOR PROTECTION CHANNEL IV CABINET #12	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
180	2-RPS-A	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'A' CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
181	2-RPS-B	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'B'	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		CABINET			anchorage evaluation.
182	2-RPSX-A	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'A' AUXILIARY CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
183	2-RPSX-B	REACTOR PROTECTION AND SAFEGUARD ACTUATION TRAIN 'B' AUXILIARY CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
184	2-RVLC	REACTOR VESSEL OME-1 WATER LEVEL INSTRUMENTATION CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
185	2-SA	STATION AUXILIARIES CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar panels within the control room yielding significant seismic capacity margins.
186	2-SG	STEAM GENERATOR AND AUXILIARY FEED PUMP CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
187	2-SIS	SAFETY INJECTION CONTROL PANEL	Screened	>RLGM	The panel is welded along the bottom front edge to embedded steel and braced back at the top to reinforced concrete wall. The top of the panel frames back to 2-SSR which is anchored at the top to reinforced concrete wall with six expansion anchors. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rugged configuration of the support.
188	2-SPY	CONTAINMENT SPRAY CONTROL PANEL	Screened	>RLGM	The panel is welded along the bottom front edge to embedded steel and braced back at the top to reinforced concrete wall. The top of the panel frames back to 2-SSR which is anchored at the top to reinforced concrete wall with six expansion anchors. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					on rugged configuration of the support.
189	2-SSR	ENGINEER SAFETY SYSTEM REAR INSTRUMENT/RELAY RACK	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar equipment within the control room yielding significant seismic capacity margins.
190	2-SWR	NUCLEAR INSTRUMENTAL SOURCE RANGE N21 INSTRUMENT/RELAY RACK	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar equipment within the control room yielding significant seismic capacity margins.
191	2-T21A	4KV BUS T21A SWITCHGEAR	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on anchorage evaluation performed to the RLGM.
192	2-TDAB	250VDC TRAIN 'B' TRANSFER CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
193	2-TDCD	250VDC TRAIN 'A' TRANSFER CABINET	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. Anchorage screens to the RLGM based on similar cabinets yielding significant seismic capacity margins.
194	2-TK-11	BORON INJECTION TANK	Anchorage	0.45g	The Block Wall interaction was screened for RLGM based on scaling of existing design basis calculation. The tank screening was performed using the existing evaluation for a similar tank (2-TK-12S) with the same support conditions. Tank 2-TK-12S could not be screened to the RLGM, and thus Tank 2-TK-11 did not screen. A HCLPF calculation for the tank was performed. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.45g for the welded connections.
195	2-TK-12S	SOUTH BORIC ACID STORAGE TANK	Anchorage	0.227g	The Block Wall interaction was screened for RLGM based on scaling of existing design basis calculation. Existing evaluation for the

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					tank shows no additional margin for DBE input. Therefore, this tank did not screen to the RLGM and a HCLPF calculation for the tank was performed. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.227g for the tank support that is less than the RLGM of 0.387g.
198	2-TK-253-3	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VLV NRV-152 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 2-TK-3, -5, &-7 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The plates measured 19" and 44" from the floor to plate centerlines. The tanks are 9" diameter and 56" tall. The air bottles are strapped with brackets affixed to the wall by four plates employing two ¾" bolts each. Note that tank configuration has changed since A-46 evaluation but does not change the conclusion. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rugged configuration of support.
199	2-TK-253-4	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VLV NRV-153 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 2-TK-4, -6, &-8 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The plates measured 19" and 44" from the floor to plate centerlines. The tanks are 9" diameter and 56" tall. The air bottles are strapped with brackets affixed to the wall by four plates employing two ¾" bolts each. Note that tank configuration has changed since A-46 evaluation but does not change the conclusion. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rugged configuration of support.
200	2-TK-253-5	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VLV NRV-152 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 2-TK-3, -5, &-7 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The plates measured 19" and 44" from the floor to plate centerlines. The tanks are 9" diameter and 56" tall. The air bottles are strapped with

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					brackets affixed to the wall by four plates employing two ¾" bolts each. Note that tank configuration has changed since A-46 evaluation but does not change the conclusion. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rugged configuration of support.
201	2-TK-253-6	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VLV NRV-153 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 2-TK-4, -6, &-8 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The plates measured 19" and 44" from the floor to plate centerlines. The tanks are 9" diameter and 56" tall. The air bottles are strapped with brackets affixed to the wall by four plates employing two ¾" bolts each. Note that tank configuration has changed since A-46 evaluation but does not change the conclusion. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rugged configuration of support.
202	2-TK-253-7	PRESSURIZER TRAIN 'B' PRESSURE RELIEF VLV NRV-152 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 2-TK-3, -5, &-7 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The plates measured 19" and 44" from the floor to plate centerlines. The tanks are 9" diameter and 56" tall. The air bottles are strapped with brackets affixed to the wall by four plates employing two ¾" bolts each. Note that tank configuration has changed since A-46 evaluation but does not change the conclusion. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rugged configuration of support.
203	2-TK-253-8	PRESSURIZER TRAIN 'A' PRESSURE RELIEF VLV NRV-153 EMERGENCY AIR TANK	Screened	>RLGM	Tanks 2-TK-4, -6, &-8 grouped together and anchored by four plates bolted to the wall with two 3/4" bolts in each plate. The plates measured 19" and 44" from the floor to plate centerlines. The tanks are 9" diameter and 56" tall. The air bottles are strapped with brackets affixed to the wall by four plates

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					employing two ¾" bolts each. Note that tank configuration has changed since A-46 evaluation but does not change the conclusion. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on rugged configuration of support.
204	2-TK-32	CONDENSATE STORAGE TANK	Anchorage	0.481g	Rust was found on the strap supports. A HCLPF calculation was performed for the degraded condition. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.481g.
205	2-TK-37	COMPONENT COOLING WATER SURGE TANK	Anchorage	0.447g	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Potentially governing Block Wall interaction and the tank anchorage could not be screened for RLGM. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-005 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Screened in ESEP Tanks" (Ref. 10.2) is 0.447g for the tank anchorage.
206	2-TR21A	600V BUS 21A SUPPLY TRANSFORMER	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation. The governing HCLPF capacity for the block wall according to S&A Calculation 13Q3208-CAL-004 – "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 1.270g and did not control the capacity.
207	2-TR-AFWX	TRANSFORMER FOR AFWX DIST PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46 anchorage evaluation.
208	2-TR-ELSC	TRANSFORMER FOR ELSC DIST PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling of existing USI A-46

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					anchorage evaluation.
209	2-UDISB-B1	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B1	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. The components within the igniter box are not fragile and are encompassed by that typically contained in other electrical boxes. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage screened for RLGM based on scaling existing anchorage evaluation.
210	2-UDISB-B13	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B13	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 2-UDISB-B1.
211	2-UDISB-B14	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B14	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 2-UDISB-B1.
212	2-UDISB-B15	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B15	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 2-UDISB-B1.
213	2-UDISB-B16	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B16	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 2-UDISB-B1.
214	2-UDISB-B17	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B17	Screened	>RLGM	Igniter box is bolted to horizontal unistruts bolted to an embedded vertical unistrut on the left and a 3/8" expansion anchor on the right. See notes for 2-UDISB-B1.
215	2-UDISB-B2	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B2	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 2-UDISB-B1.
216	2-UDISB-B29	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN	Screened	>RLGM	Igniter box is bolted to two horizontal unistruts which are welded directly to the column. The hydrogen igniters are

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		'B' GLOW PLUG ASSEMBLY #B29			composed of the Igniter Box, glow plug, shield and other associated hardware. The igniters attached to the catwalk wide flange members. A HCLPF calculation was performed for 2-UDISB-B29. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not control capacity.
217	2-UDISB-B3	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B3	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 2-UDISB-B1.
218	2-UDISB-B30	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B30	Screened	>RLGM	Igniter box is bolted to two horizontal unistruts which are welded directly to the column. The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. The igniters attached to the catwalk wide flange members. A HCLPF calculation was performed for 2-UDISB-B29. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not control capacity.
219	2-UDISB-B31	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B31	Screened	>RLGM	Igniter box is bolted to two horizontal unistruts which are welded directly to the column. The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. The igniters attached to the catwalk wide flange members. A HCLPF calculation was performed for 2-UDISB-B29. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					control capacity.
220	2-UDISB-B32	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B32	Screened	>RLGM	Igniter box is bolted to two vertical unistruts which are U-bolted to the top and bottom handrail of the catwalk. The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. A HCLPF calculation was performed for 2-UDISB-B32. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not control capacity.
221	2-UDISB-B33	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B33	Screened	>RLGM	Igniter box is bolted to two vertical unistruts which are U-bolted to the top and bottom handrail of the catwalk. The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. A HCLPF calculation was performed for 2-UDISB-B32. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not control capacity.
222	2-UDISB-B34	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B34	Screened	>RLGM	Igniter box is bolted to two vertical unistruts which are U-bolted to the top and bottom handrail of the catwalk. The hydrogen igniters are composed of the Igniter Box, glow plug, shield and other associated hardware. A HCLPF calculation was performed for 2-UDISB-B32. The governing HCLPF capacity for the catwalk according to S&A Calculation 13Q3208-CAL-006 – "High Confidence Low Probability of Failure (HCLPF) Calculations for Containment Catwalk and Attached Hydrogen Glow Plugs"" (Ref. 10.3) is 0.86g and did not control capacity.
223	2-UDISB-B4	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN	Screened	>RLGM	Box dimensions are 16"x12"x8". Unistruts are approximately 16" apart vertically for support. Horizontal running support

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
		'B' GLOW PLUG ASSEMBLY #B4			unistruts are bolted to embedded unistruts spaced at 48" from each other, running vertically. The box is located such that the bottom of the box is flush with the bottom horizontal unistrut, and 15" from the center of the box to the right vertically running embedded unistrut. See discussion for 2-UDISB-B1. Assembly screens for 0.8g to 1.2g screening lane in EPRI NP-6041-SL (Ref. 1) and anchorage loadings from RLGM input spectra (Ref. 2)
224	2-UDISB-B5	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B5	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 2-UDISB-B1.
225	2-UDISB-B6	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B6	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 2-UDISB-B1.
226	2-UDISB-B7	CONTAINMENT HYDROGEN IGNITION UPPER VOLUME TRAIN 'B' GLOW PLUG ASSEMBLY #B7	Screened	>RLGM	Igniter box is attached to horizontal unistruts bolted to vertical embedded unistruts. See notes for 2-UDISB-B1.
227	2-VR-LDISB-4	LOWER CONTAINMENT TRAIN B DISTRIBUTED IGNITION SYSTEM VOLTAGE REGULATOR	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-004 – "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.760g and does not control the capacity.
228	2-VR-UDISB-3	UPPER CONTAINMENT TRAIN B DISTRIBUTED IGNITION SYSTEM VOLTAGE REGULATOR	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. The governing HCLPF capacity according to S&A Calculation 13Q3208-CAL-004 – "HCLPF Calculations for Screened in ESEP Components" (Ref. 10.1) is 0.760g and does not control the capacity.
229	2-VS	VENTILATION CONTROL PANEL	Screened	>RLGM	Equipment screens (other than anchorage) for the 0.8g to 1.2g screening lane in EPRI

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					NP-6041-SL. Anchorage screens to the RLGM based on similar panels within the control room yielding significant seismic capacity margins.
230	2-WMO-716	WEST CONTAINMENT SPRAY HEAT EXCHANGER ESSENTIAL SERVICE WATER INLET SHUTOFF VALVE	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
231	2-WMO-753	EMERGENCY ESSENTIAL SERVICE WATER SUPPLY TO TDAFPPP-4 SHUTOFF VALVE	Screened	>RLGM	This valve falls outside the Earthquake Experience Database from EPRI NP-6041-SL. However, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL based on analysis performed for a 3g input.
232	2-WRV-764	W ESW PUMP PP-7W DISCH STN WEST BASKET B/W OUT S/O	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
233	2-WRV-769	W ESW PUMP PP-7W DISCH STN WEST BASKET B/W INL S/O	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
234	2-WRV-774	WEST ESW PUMP PP-7W DISCH STN EAST BASKET B/W OUT	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL.
235	2-WRV-779	WEST ESW PUMP PP-7W DISCH STN EAST BASKET B/W INL	Screened	>RLGM	This valve falls within the Earthquake Experience Database from EPRI NP-6041-SL. Therefore, this valve screens for the 0.8g to 1.2g screening lane in EPRI NP-6041-SL. There is sufficient clearance between the valve operator and the walkway. Pipe line well supported and not a credible damaging interaction.
239	2-XRV-152	PRESSURE REGULATING VALVE	Screened	>RLGM	Small valve bolted into a small rack. Equipment screens (other than anchorage) for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.
240	2-XRV-153	PRESSURE REGULATING VALVE	Screened	>RLGM	Small valve bolted into a small rack. Equipment screens (other than anchorage)

CNP Unit 2 ESEL Item #	ID	DESCRIPTION	Failure Mode	HCLPF (compared to RLGM)	Notes
					for the 0.8g to 1.2 g screening lane in EPRI NP-6041-SL. Anchorage judged to be adequate for RLGM by inspection based on light rack with rugged anchorage.