

Duke Energy

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SECURITY-SENSITIVE INFORMATION - WITHHOLD UNDER 10 CFR 2.390(d)(1)
UPON REMOVAL OF ATTACHMENT 5 and 7 of ENCLOSURE 1. THIS LETTER IS UNCONTROLLED

June 20, 2013

10 CFR 50.54(f)

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

SUBJECT:

Duke Energy Carolinas, LLC (Duke Energy)

McGuire Nuclear Station (MNS), Unit 1

Docket Nos. 50-369

Renewed License Nos. NPF-9

Response to NRC Request for Information Pursuant to Title 10 Code of Federal Regulations 50.54(f) Regarding Seismic Aspects of Recommendation 2.3 of the Near Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident.

REFERENCES:

- 1. NRC Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident, dated March 12, 2012, Accession No. ML12053A340
- 2. EPRI Report 1025286, Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic, dated June 20, 2012
- 3. NRC Letter, Endorsement of Electric Power Research Institute (EPRI) Draft Report 1025286, "Seismic Walkdown Guidance", dated May 31, 2012, Accession No. ML12145A529
- Duke Energy's 180-Day Response to March 12, 2012, Request for Information Regarding Seismic Aspects of Recommendation 2.3 of the Near-Term Task Force Review of Insights for the Fukushima Dai-Ichi Accident, dated July 9, 2012, Accession No. ML12194A028
- 5. Duke Energy's November 26, 2012 Seismic 2.3 response to Information Requested by NRC Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3. and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident, dated March 12, 2012, Accession No. ML12361A006

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United States Nuclear Regulatory Commission June 20, 2013 Page 2

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Reference 1 to Duke Energy. On November 26, 2012, Duke Energy responded to the request and submitted the Unit 1 and Unit 2 Seismic Walkdown Reports for the accessible areas of the plant. In the response, Duke Energy also committed to provide an updated report for those inaccessible areas of Unit 1 by September 1, 2013. There were no inaccessible areas for Unit 2. A copy of the Unit 1 report is attached which documents the inspection results in Enclosure 1. Attachments 1 through 6 of the report are unchanged, but are included for completeness. Attachments 7 and 8 of the report are new and reflect the inaccessible area inspection results for Unit 1.

Attachment 5 and 7 of the report contain information that Duke Energy is requesting the NRC withhold from public disclosure in accordance with the requirements of 10CFR 2.390(d)(1). In accordance with NRC Regulatory Issue Summary 2005-26, an affidavit is not required for the security-sensitive information withheld under 10 CFR 2.390(d)(1).

This letter contains no new regulatory commitments.

If you have any questions or require additional information, please contact George Murphy at (980) 875-5715.

I declare under the penalty of perjury that the foregoing is true and correct. Executed on June 20, 2013.

Sincerely,

Steven D. Capps

Enclosure

United States Nuclear Regulatory Commission June 20, 2013 Page 3

XC:

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United States Nuclear Regulatory Commission June 20, 2013 Page 4

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- RGC Date File, (MG01RC)
- MNS Master File (MG01DM, File MC 801.01)
- ELL (EC05P)

United States Nuclear Regulatory Commission June 20, 2013 Page 5

ENCLOSURE 1:

McGuire Nuclear Station Unit 1 Seismic Walkdown Report Revision 1

Page 1 of 15 Rev. 1

Revision Log:

Rev. 0	Initial NRC submittal dated November 26, 2012
Rev. 1	Supplemental NRC submittal to address "initially" inaccessible components.
	Revised pages 1-15, Added ATTACHMENTS 7 & 8.

Executive Summary

The results of the McGuire Unit 1 Fukushima Dai-ichi Near-Term Task Force (NTTF) Recommendation 2.3 Seismic Walkdowns are provided here-in. The walkdowns were performed in accordance with Electric Power Research Institute (EPRI) Report 1025286, Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic (issued June 2012). The performance of the seismic walkdowns is required in response to the Commission's Regulatory (NRC) 10CFR50.54(f) letter regarding Recommendation 2.3: Seismic. The EPRI guidance outlined requirements for personnel qualifications, selection of walkdown components, the conduct of the walkdowns, evaluation of potentially adverse conditions against the plant seismic licensing basis, and reporting requirements. The guidance further provided check lists to document the performance of the seismic walkdowns and walk-bys.

Revision 0 of the submittal report documented the walkdown results for the accessible components as of November 2012. Revision 1 of the submittal report added the walkdown results for the previously in-accessible components.

1.0 Seismic Licensing Basis

Site Characteristics:

Major Category I structures are supported on sound rock (UFSAR Sections 3.7.1.4, 3.7.1.5, 3.7.1.6, 3.8.4, 3.8.5, 3.8.5.4.1). Where zones of irregular weathering of bedrock occurred, the weathered material was excavated and fill concrete was used under foundation structures, or piles were driven to suitable rock bearing for Category I structure (UFSAR Section 2.5.1.2).

Response Spectra:

The Safe Shutdown Earthquake (SSE) for McGuire is conservatively specified to have a peak ground acceleration of 0.15g horizontally and 0.10 g vertically. The Operating Basis Earthquake (OBE) is 8/15 of the SSE at all frequencies (UFSAR 2.5.2.6, 2.5.2.11, 3.1, and MCS-1465.00-00-0009, section 3.3).

The ground response spectra curves are enveloped for analysis and design of all Category 1 building foundations on closely joined rock and slightly weathered rock and for all building elevations where the floor slab rests on rock or fill concrete (MCS-1465.00-00-0009, section 3.3).

Page 2 of 15 Rev. 1

System, Structure, Component (SSC) Seismic Design:

All structures, systems and components required to shut down and maintain the reactor in a safe and orderly condition or prevent the uncontrolled release of excessive amounts of radioactivity have a seismic classification of Category 1 (UFSAR 3.2.1). The McGuire design complies with Regulatory Guide 1.29 for SSC seismic design requirements.

Seismic Category I SSCs are designed to maintain their functional capability in-the event of a SSE. The seismic design of Category I SSCs is outlined in UFSAR Section 3.2 and Tables 3-1, 3-2, 3-4 & 3-7. Seismic Category I SSCs are also designed to withstand the effects of the Operating Basis Earthquake without loss of capability to perform their safety functions. Applicable seismic design codes and standards include (MCS-1465.00-00-0009, Section 3.2, UFSAR section 3.2 and Tables 3-1 through 3-7):

- 10CFR50, Appendix A, General Design Criteria 2 Design Bases for Protection Against Natural Phenomena
- Duke Class A, B, C piping per ASME Section III, 1971, except for the Nuclear Service Water piping which was designed per ANSIB31.7, Class III (Reference UFSAR Table 3-5)
- Duke Class A, B, C valves per ASME Section III, 1971 (Reference UFSAR Table 3-6)
- Duke Class F valves per ANSI B31.1.0 (1967), Class III (Reference UFSAR Table 3-6)
- Regulatory Guide 1.29, "Seismic Design Classification," Revision 3, September 1978.
- IEEE Standard 344-1971, "Recommended Practices for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Station.
- IEEE Standard 344-1975, "Recommended Practices for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Stations.

Page 3 of 15 Rev. 1

2.0 Personnel Qualifications

The personnel involved in the McGuire NTTF Recommendation 2.3 Seismic Walkdown effort satisfactorily met the qualification requirements of EPRI 1025286. The personnel responsibilities and qualifications are outlined in TABLE 2-1 below. Additional Peer Review Team experience is outlined within the Peer Review Report (ATTACHMENT 6).

TABLE 2-1
Walkdown Personnel Experience and Training

	Walkdown Personnel Exp	perien	ce and Trai	nıng	<u> </u>			
Personnel	Degree	Years of Experience	Relevant Qualifications	SWE	SWEL Development	CLB Reviews	IPEEE Vulnerability Resolution	Peer Reviews
Mark Eli, P.E. (Ares)	BS/Civil Engineering	32	SQUG ⁽¹⁾ SWE ⁽²⁾⁽³⁾	х				
Charles M. Conselman, P.E. (ARES)	BS/Civil Engineering	28	SWE (2)(3)	Х				
Bryan Hanna, P.E. (ARES)	BS/Civil Engineering	12	SWE (2)(3)	х				
Kevin Rubright (ARES)	BS/Civil Engineering	30	SWE (2)(3)	Х				
Harpreet Ghuman (ARES)	BS/Civil Engineering	4	SWE (2)	Х				
Paul Baughman, P.E. (Ares)	BS/Civil Engineering	>40	SQUG ⁽¹⁾ SWE ⁽²⁾					X ⁽³⁾
George Bushnell, P.E. (SHAW)	BS/Mechanical Engineering	>40	SQUG ⁽¹⁾ SWE ⁽²⁾	_				Х
George Hermann (SHAW)	BS/Mechanical Engineering Technology	17	SWE (2)	х				
Thomas Tonden, P.E. (SHAW)	MS Energy Engineering	>35	SWE (2)	Х				
Karen Kuhn (SHAW)	BS/Nuclear Engineering	11	SWE (2)	Х				
Robert L. Keiser, P.E. (Duke)	BS/Civil Engineering MS/Civil Engineering	>20	SQUG ⁽¹⁾ SWE ⁽²⁾					Х
Breece C. Nesbitt, P.E. (Duke)	BS/Civil Engineering	>40	SWE (2)	Х				
Mike F. Langel, P.E. (Duke)	BS/Civil Engineering ME/Civil Engineering	>35	SWE (2)	х		Х		
Charles N. Cunningham, (Duke)	BS/Civil Engineering MS/Civil Engineering	4	SWE (2)	х		Х		
Harry E. Vanpelt, P.E. (Duke)	BS/Nuclear Engineering, MS/Mechanical Engineering	36			x		x	
Phil A. Thompson (Duke)	N/A	37	SRO ⁽⁴⁾ (25 yrs)		Х			1
Bryan D. Meyer (Duke)	BS/Mechanical Engineering	>28	SWE (2)	X	Х	Х	Х	
Drew Lyerly (Duke)	BS/Civil Engineering	6				X		
					L			

NOTES:

- 1) SQUG Seismic Capability Engineers (SCEs) have successfully completed SQUG training.
- 2) Seismic Walkdown Engineers (SWEs) have successfully completed EPRI 1025286 2 day walkdown training course.
- 3) Senior Team Member.
- 4) Prior Senior Reactor Operator (SRO).

Page 4 of 15 Rev. 1

3.0 Selection of Equipment for the SWEL-1 and SWEL-2 Lists

The McGuire Unit 1 SWEL-1 and SWEL-2 equipment selection was performed in accordance with the EPRI guidance outlined in EPRI Technical Report #1025286 (Reference MCC-1612.00-00-0001, Rev. 0).

The EPRI SWEL-1 Screening Criteria #1 through #3 are as follows:

- 1) Seismic Category I licensing bases,
- 2) Exclude structures, penetrations, and piping systems
- Equipment must perform safety function (reactor reactivity control, reactor coolant pressure control, reactor coolant inventory control, decay heat removal, containment integrity). The EPRI screening criteria further allows major NSSS equipment inside containment to be excluded.

The original McGuire IPEEE Seismic Walkdown list (MCC-1535.00-00-0004, Rev. 0, ATTACHMENT 24) was used as an initial "Base-1 List" of potential SWEL-1 walkdown components. This list includes shared, Unit 1 and Unit 2 components; however, only the shared and Unit 1 components are considered part of the Unit 1 SWEL-1 Base-1 list. Additionally, the IPEEE list included some non-safety/non-seismic equipment, which were not considered to be part of the Unit 1 SWEL-1 Base-1 list. The prior IPEEE list effectively represents the output of EPRI guidance equipment Screening criteria's #1, #2 and #3. The SWEL-1 "Base-1 List" is provided in ATTACHMENT 1.

EPRI Screening criteria #4 was then used to select equipment from this "Base List." EPRI screening criteria #4 requires a representative cross-section of the following sample selection attributes:

- include a variety of systems.
- Include variety of types of equipment,
- Include a variety of equipment environments,
- Include major new/replacement equipment
- Include equipment enhancements implemented in response to prior IPEEE walkdown identified discrepancies

The McGuire Unit 1 SWEL-1 equipment list (ATTACHMENT 2) comprised 99 components in ~22 different systems. Safety and PRA significant systems are well represented within the SWEL-1 equipment selection, such as Auxiliary Feedwater (CA, SA), Emergency Service Water (RN), Essential AC Power (EDG, EPC, EPE), Vital DC Power (EPQ, EPG, EPL), Solid State Protection System (IPE), Residual Heat Removal (ND), Safety-Injection (ND, NI, NV), Closed Cooling Water System (KC), control room ventilation (VC, YC), Main Steam (SM, SV), Reactor Coolant (NC), and containment spray (NS) systems. The systems and components selected for SWEL-1 support the EPRI screen #3 safety functions, which are necessary to achieve safe reactor shutdown, and/or containment isolation.

Page 5 of 15 Rev. 1

The SWEL-1 list represented equipment from each of the EPRI guidance equipment classes, with the exception of air compressors and motor-generator sets. McGuire does not have any Seismic Cat I equipment within these two equipment classes. The SWEL-1 lists included equipment located in ~44 different plant areas/rooms locations. The selected equipment locations represent a broad range of equipment environmental conditions (e.g. inside containment, partial outdoor exposure, electrical/mechanical penetration rooms, pipe-chases, control room, etc.). Modified, new, and/or replacement equipment comprised >20% of the SWEL-1 list. Similarly, the SWEL-1 list included some equipment which was enhanced in response to the prior IPEEE walkdown effort.

The SWEL-1 component selection further considered PRA risk significance relative to the external seismic event. The SWEL-1 component list included a broad sampling of components, which were identified to have a significant contribution to CDF for the external seismic event.

The McGuire Unit 1 SWEL-2 spent fuel pool equipment list was developed in accordance with the EPRI guidance. Seismic Category I structures, piping, and containment penetrations were specifically excluded by the EPRI guidance. The four screening criteria specified were as follows:

- 1) Seismic Category I licensing bases,
- 2) Spent Fuel Pool (SFP) equipment appropriate for an equipment walkdown process,
- 3) Sample considerations represent broad population of equipment with considered sample selection attributes such as:
 - a. represent a variety of systems,
 - b. major new/replacement equipment,
 - c. variety of equipment types,
 - d. variety of environments

OR

4) Equipment which could result in rapid drain down of the SFP (includes both seismic and non-seismic components and similar factors outlined in 3) above, as practical).

The SWEL-2 equipment "Base-2 List" (ATTACHMENT 3) was established based on screens #1 and #2 above. Equipment was selected from the Base-2 List based on screening criteria #3 above, and primarily included major equipment such as the spent fuel cooling system pumps, pump motor air handling units, and heat-exchangers.

The SWEL-2 list was further supplemented based on screening criteria #4 above, to include equipment which could result in SFP rapid drain-down, as defined by the EPRI guidance. The SFP mechanical connections were further reviewed to ascertain whether they could present the potential for rapid drain-down of the SFP in-the-event of postulated seismic event. Rapid drain-down is considered to be an uncontrolled and unlimited drain-down due to a postulated leakage from a mechanical piping/component interface. The EPRI guidance provided a definition for SFP uncontrolled drain-down, which was seismic induced leakage which could drain SFP to within 10' of the top of the fuel within 72 hours. Unlike the prior screening criteria, screen #4 does not exclude non-seismic equipment.

Page 6 of 15 Rev. 1

The McGuire Unit 1 & 2 SFP relies on passive design features to limit the amount of inventory which could be inadvertently drained. In general, the mechanical piping interfaces below the SFP normal water level are either equipped with siphon breakers, and/or the pipe elevation does not extend more than 2-4' below normal SFP water level. The McGuire SFP is normally aligned to the fuel transfer canal to support the Safe Shutdown Facility Standby Make-up Pump (SBMUP). The SBMUP is periodically aligned to the spent fuel pool for testing and was considered to be a potential rapid drain-down pathway, thus some of the associated components in the flow-path were included in the SWEL-2 Rapid Drain Down list (ATTACHMENT 3). The SWEL-2 Rapid Drain Down List also included some components which could pose a rapid drain down risk during refueling operations (e.g. reactor cavity seal, refueling canal drains, etc.). The final SWEL-2 list was selected based on a sampling of appropriate equipment types from the Base-2 and Rapid Drain Down Lists. The SWEL-2 list is provided in ATTACHMENT 4 and was comprised of 8 components.

4.0 Seismic Walkdowns and Area Walk-Bys

Duke Energy contracted the Shaw Group / ARES Corporation team to perform the NTTF 2.3 seismic walkdowns at McGuire Nuclear Station. The McGuire Unit 1 walkdown summary report, the component Seismic Walkdown Checklists (SWC), and the Area Walk-By Checklists (AWC) are provided in ATTACHMENT 5. Duke Energy personnel subsequently completed the walkdown checklists for the initially inaccessible components, and these are provided in ATTACHMENT 7.

The Seismic Walkdowns and Area Walk-bys were conducted in accordance with the EPRI guidance outlined in EPRI Technical Report #1025286 (Reference MCC-1612.00-00-0001, Rev. 0). The EPRI guidance Seismic Walkdown Check-lists (SWC)s were completed for each item on the SWEL. The EPRI guidance Area Walk-by Check-lists (AWC)s were also completed for areas/rooms associated with SWEL equipment.

The component seismic walkdown inspections were primarily focused on the identification of potentially degraded component anchorage conditions, and potentially adverse seismic interactions with surrounding SSCs. For the non-line mounted components, the visual inspections assessed whether the anchorage was degraded (e.g. bent, loose, broken, missing, corroded, localized concrete cracks). Additionally for at least 50% of the non-line mounted components, the as-built field anchorage was verified to be consistent with design documentation.

The Area Walk-by inspections were performed for SWEL equipment areas. The area walk-bys assessed whether other surrounding equipment in the area/room (up to ~35' radius around SWEL component or the room containing the SWEL component) had potentially degraded anchorage, or whether the potential for adverse seismic interactions were present.

Page 7 of 15 Rev. 1

If the Seismic Walkdown Engineers (SWEs) determined a potentially adverse seismic condition existed, then the issue was entered into the corrective action program (CAP) to allow further engineering evaluation. The CAP engineering evaluation determined whether the potentially adverse seismic condition was degraded, unanalyzed, or non-conforming to the design and licensing bases

107 Seismic Walkdown Checklists (SWC) were completed for the components listed on the SWEL. This total was comprised of 99 SWEL-1 components, and 8 SWEL-2 components. The originally accessible component walkdowns were performed by Shaw Group / ARES personnel. Duke Energy personnel completed the remaining walkdowns for the "inaccessible" components which required a unit outage to complete (Refer to section 4.0). For the non-line mounted SWEL equipment, an anchorage as-built verification was completed for 57% of the equipment with anchorage. Additionally, a total of 53 (48 by Shaw/ARES personnel, and balance by Duke personnel) Area Walk-by Checklists (AWC) were completed for the SWEL-1 scope, and 2 AWC were completed for the SWEL-2 scope.

The seismic walkdowns and walk-bys identified 32 "Potentially Adverse Seismic Conditions" which are outlined in TABLE 4-1. Refer to the respective TABLE NOTE(s) for the "CAP Resolution" designation. The potentially adverse seismic conditions were entered into the Corrective Action Program (CAP). Engineering evaluation was performed as warranted for the potentially adverse seismic condition, and in all cases the engineering evaluation concluded that the condition was in conformance with the current licensing bases. In some cases work requests or CAP ACTIONS were initiated as required to resolve minor issues (e.g. loose fastener, add grout, etc.), and/or to enhance field equipment clearances.

Page 8 of 15 Rev. 1

TABLE 4-1Potentially Adverse Seismic Conditions

	Potentially Adverse Seismic Conditions	CAP Disposition
Walkdown Item	Potentially Adverse Condition	CAP Disposition
1) 1EPQ-BC-EDGA: 1A EDG Battery Charger	Elevated shim height not depicted by drawing.	3
2) 1-EPE-TF-ELXB: Transformer 4.16 KV/600 VAC	The concrete slab adjacent to two vertical supports of the equipment contains cracks.	1
3) 1ETB: 4.16 kV Essential Power Switchgear	 i) Cracks in the concrete floor in the vicinity of bolts for units: 1 ETB-17, 1 ETB-16, 1ETB-13, 1 ETB-11, 1 ETB-6, and 1 ETB-9. HN 3440 anchors (observed) are consistent with MC-1906-04, Rev. 8 and calculations MCC-1535.00-00.0004. However, ~"diameter Phillips Red Anchors are concealed (inaccessible) by the base C-channel by design. ii) Spalling at corner of grout pad at end of unit (1ETB-1). Also grout pad height is in excess of 2" resulting in less than design overlap of angle and channel at this location (1ETB-1, MC-1906-04, Rev. 8). 	i) 1 ii) 1
4) 1-EPE-TF-ELXA: 4.16 kV Essential Power Transformer	Cracks in concrete floor near 2 of 4 anchor groups. Cracks were within 10 x (anchor diameter) of anchor bolts.	1
5) 1EMXA: 600 VAC Essential MCC	Concrete cracks: Cracks in concrete floor between R6D and R5D. Floor was coated with epoxy; therefore unable to measure crack width. Anchor bolt location was unable to be determined (see above); therefore, unable to determine distance between anchor bolt and crack in concrete floor.	1
6) 1VGTK0062: 1A1 EDG Starting Air Tank	Interaction effect: Relief valve (1VG-33) on top of tank is within 1/2" of cable tray.	1
7) 1VGTK0063: 1A2 EDG Starting Air Tank	Interaction effect: Relief valve 1VG-34 is approximately 1" from cable tray.	1
8) 1KCTK0009: U1 KC Surge Tank	Interaction effect: Bottom of ladders are welded to access platform (independent of tank) and top of ladder is lashed to tank nozzles. Potential for "event caused" flooding.	1
9) 1ND-4B: RHR FWST Suction Isolation	Interactions effect: Cable tray tie rod support hanger is nearly torn off of the tray which reduces support of cantilevered portion of tray carrying actuator cables.	2
10)1CA-56A: MDCAP to 1B SG	Interaction effect: Cable tray feeding 1CAPNAFPB panel has cables resting against valve operator air manifold	1

CAP DISPOSITION NOTE(s):

- 1) Field configuration meets Current Licensing Bases (CLB) requirements, and no field work required.
- 2) Field configuration meets CLB requirements; however, work request/work order/ACTION initiated to resolve minor issue, verify unknown condition, or enhance/correct field configuration.
- 3) Field configuration <u>meets</u> CLB requirements; however, design drawing updated to reflect field configuration.
- 4) CLB not met, and required field modification.

Page 9 of 15 Rev. 1

TABLE 4-1 Potentially Adverse Seismic Conditions

	Potentially Adverse Seismic Conditions	
Walkdown Item	Potentially Adverse Condition	CAP Disposition (See notes)
11)Room 600, MDCAP Room: AWC for 1CA-56A	Interaction effect: Approximately 3/4" air supply pipe to valve has 3+ elbows and approx. 15' of pipe with no support.	1
12)Room 600, U1 MDCA Pump Room: Area Walk-By for 1CAPNAFPA;	Interaction effect: i) Valve 1 CA-36AB air connection to (black) air regulator does not have adequate clearance from vertical support member (see photo). ii) Discharge line from floor drain sump tank impinges on valve 1 WL-359 and rests on another line approximately 5 ft. downstream. This line also passes over Unit 1 Aux. shutdown panel.	i) 2 ii) 1
1CAPU0001; and 1WL322B.	 iii) 1-V520 handwheel has inadequate clearance to U1 line. Not significant. iv) Approx. 3" pipe directly over enclosure has threaded connections and is hung with threaded rods. Pipe is touching stanchion (but not attached) directly above cabinet. Pipe may deflect and hit vertical Unistrut. 	iii) 1
13)1EVDA: Vital Panel 125VDC Breaker	Interaction effect: Could not verify whether 1 EVDA and 1 EVKA are bolted together. Based on MCM-1314.01-34, 1EVDA appears to be a discrete enclosure from 1 EVKA. Unclear whether interactions between enclosures was considered in IPEEE review.	2
14)701- Vital Battery Area A: Area Walk- By for 0-EPL-BC- EVCA: 1 EVDA, etc.	Interaction effect: Abandoned eyewash supply pipe is buckled and kinked. It is supported by rod hangers. Pipe is located over various enclosures and equipment throughout vital battery room.	1
15)701- Vital Battery Area B AWC for 0- EPL-BC-EVCB;1 EVDB; EVDB; etc.	Interaction effect: Abandoned eyewash supply pipe is buckled and kinked. It is supported by rod hangers. Pipe is located over various enclosures and equipment throughout vital battery room.	1
16)701- Vital Battery Area C AWC for 0- EPL-BC-EVCC; EVDC, etc.	Interaction effect: Abandoned eyewash supply pipe is buckled and kinked. It is supported by rod hangers. Pipe is located over various enclosures and equipment throughout vital battery room.	1
17)1EVDD: 125VDC Vital Battery Breaker Panel	Interaction effect: Shims were located between block wall and cabinet.	1
18)701- Vital Battery Area D AWC for 1EVDD; 1EPG-BI- EVID, etc.	Interaction effect: Abandoned eyewash supply pipe is buckled and kinked. It is supported by rod hangers. Pipe is located over various enclosures and equipment throughout vital battery room.	1
19)Room 705- Electrical Penetration Room: AWC for 1ETB & 1- EPE-TF-ELXB	Interaction effect: Rigid ducts span between 1 EFE-LX-ELXB and similar units in the room.	1

CAP DISPOSITION NOTE(s):

- 1) Field configuration meets Current Licensing Bases (CLB) requirements, and no field work required.
- 2) Field configuration meets CLB requirements; however, work request/work order/ACTION initiated to resolve minor issue, verify unknown condition, or enhance/correct field configuration.
- 3) Field configuration meets CLB requirements; however, design drawing updated to reflect field configuration.
 4) CLB not met, and required field modification.

Page 10 of 15 Rev. 1

TABLE 4-1
Potentially Adverse Seismic Conditions

	Potentially Adverse Seismic Conditions	
Walkdown Item	Potentially Adverse Condition	CAP Disposition (See notes)
20)Room 730: AWC for 1NI-178B.	Interaction effect: 1 KC-325 valve actuator within 1/4" of 10" diameter pipe that is suspended in a hanger that is not restrained vertically.	1
21)Room 730: VCT Hallway: AWC for 1NV-141A.	Interaction effect: Directly below 1NV-146 -3 feet, there is a loose piece of pipe and a small tool that could fall during a seismic event.	1
22)Room 730: VCT Hallway: AWC for 1NV-141A.	 Interaction effect: Valve actuator, 1NVG-137A, conduit connections are resting on a fixed support. 6" pipe at ceiling has slipped off center of support held by 2 spring cans, one spring can is fully-compressed, other appears loose. Valve 1FW23 is in this line. 	i) 2 ii) 1
23)1KCPU0002: 1A2 KC Pump	Interaction effect: Fire sprinkler line over pump in contact with wire-way to pump motor.	1
24)Room 601, U2 MDCA Pump Room: AWC for 0RN7A	Interaction effect: Sump drain pipe is attached to the ceiling with threaded rod and could displace into pressurized tubing for auxiliary feedwater pump 2CAMR0002/2BETB6	1
25)1NSHX0004: 1B Containment Spray Heat Exchanger	Notched column flanges: Anchors are complete; however, multiple wide flange columns have notches in the flange near base plate.	1
26)1NSHX0003: 1A Containment Spray Heat Exchanger	Notched column flanges: Anchors are complete; however, multiple wide flange columns have notches in the flange near base plate.	1
27)Unit 1, Room 926: AWC for 1VC-1A	House-keeping: Trash can was not secured / constrained.	1
28)1NVPU0046: Standby Make-up Pump	Interaction effect: Valve 1NV-937 has contact with pump discharge pipe, which could adversely affect the function of the pump in a seismic event.	1
29)1KFPU0001: 1A KF Pump	Interaction effect: end of valve stem (1KF-2) on pump suction valve is within ~1/8" of a structural (HSS) support.	1
30)Room 816: AWC for 1KFPU0001&2; 1KFHX0003&4; 1VAAH0031	Interaction effect: One end of 4" cable tray that supports a flexible conduit to 1 MRNSV2400 (Fuel Pool Cool Pump Air Cooler B) solenoid was supported/"anchored" by something resembling duct tape (only).	2
31) 1B Cold Leg Accumulator Room: AWC for 1NI-431B	Instrument impulse tubing track L-bracket support not tightly secured for 1NIIV5060.	2
32) 1ETB 4kV Essential Switchgear SWC	Fluorescent light fixture adjacent to front of 1EPC-BK-ETB14 had a single unsecured rod-hanger.	2

CAP DISPOSITION NOTE(s):

- 1) Field configuration meets Current Licensing Bases (CLB) requirements, and no field work required.
- 2) Field configuration <u>meets</u> CLB requirements; however, work request/work order/ACTION initiated to resolve minor issue, verify unknown condition, or enhance/correct field configuration.
- 3) Field configuration <u>meets</u> CLB requirements; however, design drawing updated to reflect field configuration.
- 4) CLB not met, and required field modification.

Page 11 of 15 Rev. 1

Additionally, there were 11 SWCs which documented that portions of internal electrical cabinet anchorage was concealed in-part or entirely, and the SWCs were designated to be "unknown." The SWC for 1ETB (4 kV Essential Switchgear) was initially specified to be "unknown" due to personnel safety concerns, thus this component internal anchorage inspection was deferred (refer to the inaccessible component section below). The remaining 10 SWCs which were designated "unknown" are as follows:

- 6 SWCs were associated with 125 VDC vital battery distribution centers (EVDA, EVDB) and 600 VAC Essential MCCs (1EMXA, 1EMXA-1, 1EMXB, 1EMXB-1) in which portions of anchors were not accessible because they were covered by structural members or the embedded "C"-channel. Some physical equipment demolition would be required to visually access all the anchorage.
- 3 SWCs (EMXE 600 VAC MCC, 1A EDG Battery, 1A CA pump control panel) only a portion of the internal anchorage was visible, due to concealment by wires, wire-ways, or other structure. A significant portion of the cabinet anchorage was visibly inspected (16 of 18 bolts for EMXE, 10 of 12 fasteners for 1A EDG battery, 8 of 12 anchors for the 1A CA Pump Control Panel). The anchors which could not be visually inspected are judged to be in acceptable condition based on the satisfactory condition of the visually inspected anchorage.
- The SWC for the Turbine Driven Auxiliary Feedwater Pump (TDCAP) control panel the
 internal anchorage was concealed by a sheet metal shroud. Therefore, it was not included
 in the 50% anchorage check. This component inspection was limited to the visual of
 internal cabinet components to ensure they were secure, exterior perimeter inspection of
 the cabinet concrete, and for local seismic interaction concerns.

This equipment was retained on the SWEL to satisfy various sample selection attributes; however, some physical equipment demolition would be required to visually access all the anchorage. This equipment is located in a dry, mild environment and not exposed to any physical degradation mechanisms. The SWCs and associated inspections are deemed to satisfactorily meet the intent of the published EPRI walkdown guidance. Based on the aggregate results of the seismic walkdowns, there were no significant anchorage deficiencies, nor licensing bases issues identified. Based on the foregoing discussion, no further equipment walkdowns are planned for these components.

Page 12 of 15 Rev. 1

INACCESSIBLE COMPONENTS:

The Unit 1 components initially deemed to be inaccessible, which required a unit shutdown in order to complete the walk-downs are listed in TABLE 4-2. These outstanding SWC and associated AWC were completed during the McGuire Unit 1 spring 2013 refueling outage. A SWC for 1ETB was initially partially completed in the fall of 2012, and 1ETB was re-inspected to verify internal anchorage condition and configuration. The AWC was previously completed for 1ETB and was not re-performed. Table 4-1 was updated based on the results of these recent walk-downs.

TABLE 4-2
Walkdown Inspections Deferred to Next Refueling Outage

Ųnit	Location	Equipment ID	Name	Scheduled Completion
1	Reactor Bldg.	1NC-32B	Reactor Coolant System Pressurizer PORV	
1	Reactor Bldg.	1NC-34A	Reactor Coolant System Pressurizer PORV	
1	Reactor Bldg.	1NI-430A	N2 Assured Supply to 1NC-34A	Completed during 2013 Spring
1	Reactor Bldg.	1NI-431B	N2 Assured Supply to 1NC-32B	Refueling outage
1	Reactor Bldg.	1ND-1B	RHR Pump Hotleg Suction Isolation	
1	Reactor Bldg.	1ND-2AC	RHR Pump Hotleg Suction Isolation	
1	Auxiliary Bldg.	1ETB	4Kv Essential Switchgear	

5.0 Licensing Basis Evaluations

As outlined in section 4.0 TABLE 4-1, a total of 32 Potentially Adverse Seismic Conditions (PASC) were identified by the Seismic Walkdowns and the Area walkby's. The potentially adverse seismic conditions were entered into the Corrective Action Program (CAP). Engineering evaluation was performed as warranted for the potentially adverse seismic condition, and in all cases the engineering evaluation concluded that the condition was in conformance with the current licensing bases. In some cases work requests or CAP ACTIONS were initiated to resolve minor issues (e.g. loose fastener, add grout, etc.), update design documents, and/or to enhance field equipment clearances.

The potential adverse conditions and their individual Problem Investigation process (PIP) tracking numbers are listed in the Unit 1 NTTF 2.3 Seismic Walkdown Reports (ATTACHMENTs 5 and 7).

6.0 IPEEE Vulnerabilities

The McGuire IPEEE NRC submittal of 6/1/94 (Reference 8) concluded that there were no vulnerabilities from external events. Thus, there were no identified plant changes which would significantly reduce the risk from external events.

Page 13 of 15 Rev. 1

Table 3-3 of the IPEE NRC Submittal identified several enhancements to resolve minor field walkdown issues (References 6, 8, ATTACHMENT 3). These enhancements are listed in TABLE 6-1.

TABLE 6-1
IPEEE Enhancements

Equipment Deficiency Identified	Resolution	Date Resolved
Unit 1 EDG battery racks were missing spacers.	WO 94050272 & 94050263 installed missing spacers. (NAS WOs# 00326062 & 00326059)	1EDGA Complete 12/29/94 1EDGA Complete 11/21/94
Unit 2 Upper Surge Tank anchor bolts missing.	Replaced bolts per WR 93034428.	PIP M94-1003 (Reference 7.4) documented complete prior to 1/25/96.
MCCs were noted to be in contact with each other at a corner (Re. Attach. 1 of Reference 7.3): • 1EMXB and 1EMXB-1 • 2EMXB and 2EMXB-1	MGMM-3870 mechanically fastened the MCCs together to prevent interaction.	 WO # 00316559 complete prior to 10/5/95 WO # 00316580 complete prior to 10/4/95
Auxiliary Feedwater CST anchor bolts and nuts exhibited corrosion.	WO 94030900 cleaned and recoated fasteners.	PIP M94-1003 (Reference 7.4) documented complete prior to 1/25/96.
Various movable equipment where noted to be unsecured and could pose a seismic interaction concern.	Guidelines were incorporated within NSD-104 for station house-keeping.	PIP M94-1003 (Reference 7.4) documented complete prior to 1/25/96.
Turbine Driven Auxiliary Feedwater Pump control cabinet in contact with 'CA' piping.	MM-6664/WO 94095550 trimmed panel corner to eliminate contact and resealed cabinet.	PIP M94-1003 (Reference 7.4) documented complete prior to 1/25/96.
KC Heat exchanger saddle bases and concrete curbs require grouting.	MM-4118 eliminated pipe interference and add grout. W/O"s 94064720, 94053337, 94065089, and 94065092	PIP M94-1003 (Reference 7.4) documented complete prior to 1/25/96.
Grating in contact with steam vent valves in exterior doghouses.	Grating trimmed per WR 93034096 & 93034099.	PIP M94-1003 (Reference 7.4) documented complete prior to 1/25/96.
Arc barrier connections were not secure within main control boards.	WO 94010441 & 94010379 secured the connections.	PIP M94-1003 (Reference 7.4) documented complete prior to 1/25/96.

Page 14 of 15 Rev. 1

7.0 Peer Review:

Duke Energy contracted with the Shaw Group (Shaw) / ARES Corporation (ARES) Team to perform the NTTF 2.3 peer review for the McGuire Nuclear Station (MNS). The Peer Review Report for the initially accessible components is contained in ATTACHMENT 6. A supplemental Peer Review Report (ATTACHMENT 8) was performed for the initially inaccessible components, which were completed during McGuire Unit 1 spring 2013 refueling outage.

The Peer Review Team consisted of three individuals (refer to Table 2-2), all of whom have seismic engineering experience as it applies to nuclear power plants. These individuals participated in the peer review of each of the activities.

The Shaw/ARES methodology conforms to the guidance in Section 6 of EPRI 1025286. The peer review covered the following:

- The selection of the SSCs included on the Seismic Walkdown Equipment List (SWEL).
- A sample of the checklists prepared for the seismic walkdowns and area walk-bys.
- The licensing basis evaluations.
- The decisions for entering the potentially adverse conditions in the Corrective Action Program (CAP) process.
- · The submittal report.

The peer review process for the SWEL development and the seismic walkdowns consisted of the following:

- Reviewing the activity guidance in EPRI 1025286, the NEI Q&A bulletins, the NEI first-mover reports, and NRC Temporary Instruction 2515/188.
- Conducting an in-process review at the plant site, including interviews with the personnel performing the activity and reviewing in-process documentation.
- Performing an in-plant surveillance (for the walkdown activity) of a seismic walkdown and an area walk-by.
- Providing in-process observations and comments to the personnel performing the activities.
- Conducting a final review of a sample of the completed documentation.

The peer review process for the licensing basis evaluations and the decisions for entering potentially adverse conditions into the CAP consisted of reviewing the overall review process and a sample of the licensing basis reviews. The peer review process for the submittal report consisted of reviewing the draft submittal prepared by McGuire Design Engineering for licensing review. The peer review of the licensing basis evaluations resulted in some open issues; however, those issues were addressed by updating the licensing basis evaluations documented in the CAP.

The conclusion of the peer review is that the MNS NTTF 2.3 seismic walkdown effort has been conducted in accordance with the guidance in EPRI 1025286. Comments made during the inprocess review of the SWEL development and the walkdowns have been addressed satisfactorily. In-process comments on the final walkdown reports, the licensing basis reviews, and the submittal have also been resolved.

Page 15 of 15 Rev. 1

REFERENCES:

- 1) MCS-1465.00-00-0009, Rev. 1, Seismic Design Bases Document
- 2) UFSAR Sections 3.1, 3.2.1, 3.8.4, 3.8.5, Tables 3-1 through 3-7
- 3) UFSAR Section 2.5.1.2, 2.5.2 Site Geology
- 4) UFSAR Sections 2.5.2.10, 2.5.2.11 SSE/OBE
- 5) UFSAR Section 3.7 Seismic Design
- 6) MCC-1612.00-00-0001, Rev.1
- 7) EPRI Report 1025286, Dated May 2012, Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force (NTTF) Recommendation 2.3 (ATTACHMENT 1).
- 8) McGuire NRC Response to GL 88-20, Individual Plant Examination of External Events (IPEEE) Submittal, dated June 1, 1994, T.C. McMeekin to NRC.
- 9) SHAW/ARES Summary Report, Seismic Walkdown Report for Duke Energy's McGuire Nuclear Station Unit 1 1457690101-R-M-00001-1, Rev. 1 (November 5, 2012).
- 10) SHAW/ARES Summary Report, Seismic Walkdown Report for Duke Energy's McGuire Nuclear Station Unit 2 1457690101-R-M-00002-1, Rev. 1 (November 5, 2\012).
- 11) SHAW/ARES Peer Review Summary Report, "NTTF 2.3 Seismic Peer Review Report McGuire Nuclear Station Units 1 and 2 1457690101-R-M-00003-0.
- 12) MCC-1535.00-00-0003, Rev. 0, Seismic Hazard Curve Sensitivity for the McGuire IPEEE.
- 13) MCC-1535.00-00-0004, Rev. 0, Seismic PRA/IPEEE Back-up Calculation.
- 14) PIP M94-1003, 'Equipment Deficiencies Identified During the 1994 IPEEE Seismic Walkdowns.
- 15) MCS-1108.00-00-0002, Rev. 9, "Specification for the Response Spectra and Seismic Displacements for Category I Structure
- 16) 7/9/12 correspondence to NRC from Ben C. Waldrep, "Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding the Seismic Aspects of Recommendation 2.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident"
- 17) MCS-1108.02-00-0001, Rev. 5, "McGuire Structural Design Specification.

ATTACHMENTS:

- 1) SWEL-1 Base-1 List (*see note below)
- 2) McGuire Unit 1 SWEL-1 (*see note below)
- 3) McGuire Unit 1 SWEL-2 Base-2 List and Rapid Drain Down List (*see note below)
- 4) McGuire Unit 1 SWEL-2 (*see note below)
- 5) Seismic Walkdown Summary Report and Checklists (*see note below)
- 6) PEER Review Summary Reports (*see note below)
- 7) Seismic Walkdown Checklists (SWCs) and Area Walkby Checklists (AWCs) for Initially Inaccessible Components
- 8) Supplemental PEER Review Summary Reports for Initially Inaccessible Components
- *NOTE: Attachments 1-6 were originally transmitted in submittal dated 11/26/12, and are not included here-in.

ATTACHMENT 1

SWEL-1 Base-1 List

ATTACHMENT 2 McGuire Unit 1 SWEL-1

Rev. 1

ATTACHMENT 3 - McGuire Unit 1 SWEL-2 Base-2 List and Rapid Drain Down List

	Tapia	<u> </u>	I DOWII L	.100		-		
	Unit 1 SWEL-2 "Base List"		: .] 			
Equipment#	<u>Description</u>	System	Class of Equipment	Bldg	Elev.	Room #	Column- Grid	Function
1KFPU0001	1A KF Pump	KF	05-Horizontal Pump	Aux Bldg	750	816	PP-52	SFP Cooling
1KFPU0002	1B KF Pump	KF	05-Horizontal Pump	Aux Bldg	750	816	PP-52	SFP Cooling
1KFHX003	1A KF HtX	KF	21-Tanks/HtXs	Aux Bldg	750	816	PP-52	SFP Cooling
1KFHX004	1B KF HtX	KF	21-Tanks/HtXs	Aux Bldg	750	816	PP-52	SFP Cooling
1VAAH0030	1A KF Pump AHU	VA	10-AHU	Aux Bldg	750	816	PP-52	SFP Cooling
1VAAH0031	1B KF Pump AHU	VA	10-AHU	Aux Bldg	750	816	PP-52	SFP Cooling
1ETA-13	1A KF Pump Breaker	EPC	03-Med Voltage Metal Clad SWGR	Aux Bldg	750	803	AA-50	SFP Cooling
1ETB-13	1B KF Pump Breaker	EPC	03-Med Voltage Metal Clad SWGR	Aux Bldg	733	705	AA-50	SFP Cooling
1RN-140A	A KF Pump Ess AHU Sup	RN	07-AOV	Aux Bldg	750	816	PP-52	SFP Cooling
1EMXA-F3D	1A KF Pump Motor AHU Motor	EPE	01-Motor Control Centers/Wall Mounted Contactors	Aux Bldg	750	808	FF-55	SFP Cooling
1EMXB-4C	1B KF Pump Motor AHU Motor	EPE	01-Motor Control Centers/Wall Mounted Contactors	Aux Bldg	750	722	FF-55	SFP Cooling
1RN-240B	1B KF Pump Ess AHU Sup isol	RN	07-AOV	Aux Bldg	750	816	PP-52	SFP Cooling
	Unit 1 SWEL-2 "Rapid Draindown List"	:		:				
Equipment #	<u>Description</u>	System	Class of Equipment	Bidg	Elev.	Room#	Column- Grid	<u>Function</u>
1NV-842AC	SBMUP Suction Isolation	NV	08-MOV/SOV	Rx Bldg	725	Annulus	273°/61 R	SFP & Refueling Cavity Inventory
1NVAC0048	SBMUP Suction Pulsation Dampener (non-seismic SSC)	NV	00-Other- (pulsation dampener)	Rx Bldg	725	Annulus	320°/61 R	N/A
1NVPU0046	SBMUP (non-seismic SSC)	NV	05-Horizontal Pump	Rx Bldg	725	Annulus	320°/61 R	N/A
1NVAC0049	SBMUP Discharge Pulsation Dampener (non-seismic SSC)	NV	00-Other- (pulsation dampener)	Rx Bldg	725	Annulus	320°/61 R	N/A
1NVFL0047	SBMUP Discharge Filter (non-seismic SSC)	NV	00 - Other	Rx Bldg	725	Annulus	320°/61 R	N/A
1NV-849AC	SBMUP Discharge Isolation	NV	08-MOV/SOV	Rx Bidg	725	Annulus	273°/61 R	N/A
Reactor Cavity Seal	Refueling Reactor Cavity Seal	FW	00 - Other	Rx Bldg	n/a	n/A	n/a	SFP & Refueling Cavity Inventory
1FW-8, -10, -25, -26, -46, -47, -76, -75	Refuling Cavity Manual Drain Valves	FW	00 - Other	Rx Bldg	n/a	n/A	n/a	SFP & Refueling Cavity Inventory
Fuel Transfer Tube blind flange	Fuel Transfer Tube Blind Flange	KF	00 - Other	Rx Bldg	n/a	n/A	n/a	SFP & Refueling Cavity Inventory
Fuel Transfer Tube Weir Gate	Fuel Transfer Tube Weir Gate	KF	00 - Other	Rx Bldg	n/a	n/A	n/a	SFP & Refueling Cavity Inventory

Rev. 1

ATTACHMENT 4

McGuire Unit 1 SWEL-2

Equipment #	<u>Description</u>	System	Class of Equipment	Bldg	Elev.	Room#	Column- Grid	Major New/ Replacement Equipment	Function
1NV-842AC	SBMUP Suction Isolation	NV	08-MOV/SOV	Rx Bldg	725	Annulus	273°/61 R	X - actuator replacement (EC-99992)	SFP & Refueling Cavity Inventory
1NVAC0048	SBMUP Suction Pulsation Dampener (non-seismic SSC)	NV	00-Other- (pulsation dampener)	Rx Bldg	725	Annulus	320°/61 R	X - replaced MGMM11916 (EC 37849)	N/A
1NVPU0046	SBMUP (non-seismic SSC)	NV	05-Horizontal Pump	Rx Bldg	725	Annulus	320°/61 R		N/A
1KFPU0001	1A KF Pump	KF	05-Horizontal Pump	Aux Bldg	750	816	PP-52	X - replaced motor EC105550	SFP Cooling
1KFPU0002	1B KF Pump	KF	05-Horizontal Pump	Aux Bldg	750	816	PP-52		SFP Cooling
1KFHX0003	1A KF HtX	KF	21-Tanks/HtXs	Aux Bldg	750	816	PP-52		SFP Cooling
1KFHX0004	1B KF HtX	KF	21-Tanks/HtXs	Aux Bldg	750	816	PP-52		SFP Cooling
1VAAH0031	1B KF Pump AHU	VA	10-AHU	Aux Bldg	750	816	QQ-52		SFP Cooling

ATTACHMENT 6 PEER Review Summary Report

ATTACHMENT 8 Supplemental PEER Review Summary Reports for Initially Inaccessible Components

ATTACHMENT 1 SWEL-1 Base-1 List

TABLE 2 -

(B' train components gre shown in potentheses. A detailed walkdown of these components is not necessary if the 'B' train configuration is similar to the 'A' train.) Line Included in Press. bndry. CA SYSTEM COMPONENTS Sze (in.) Seismic PRA Integrity only Non-Safety AOV 1CA20AB AOV 1CA20AB AOV 1CA27A (32B) 4 AOV 1CA36AB AOV 1CA36BB AOV 1CA36AB AOV 1CA36BB AOV 1CA36BB AOV 1CA36AB AOV 1CA36AB AOV 1CA36BB AOV 1CA	MECHANICAL EQUIPMENT LIST	FC	OR MCG	-U	IRE UNIT 1	-	PEEE WALK	(D	OWN
Included in Press. bndry.		Τ		Γ					<u> </u>
Line Included in Press bndry.						ne:	e components	is	not
CA SYSTEM COMPONENTS Sze (In.) Seismic PRA Integrity only Non-Safety	necessary if the 'B' train configuration is simile	or te	the 'A' tro	nic)				
CA SYSTEM COMPONENTS Sze (In.) Seismic PRA Integrity only Non-Safety				L					
ACV 1CA2DAB ACV 1CA2TA (32B) ACV 1CA36AB ACV 1CA36AB ACV 1CA5CABB ACV 1CA5CABBB ACV 1CA5CABBB ACV 1CA5CABBBB ACV 1CA5CABBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB		上		L		L			
AOV ICA27A (32B) AOV ICA36AB AOV ICA36AB AOV ICA36AB AOV ICA52AB AOV ICA52AB AOV ICA5CA (44B) AOV ICA5CA (44B) AOV ICA5CA (44B) AOV ICA6AAB MOV ICA7AC B MOV ICA7AC B MOV ICA11A (9B) B MOV ICA15A (18B) C MOV ICA5BA (46B) A A B MOV ICA5AC A MOV ICA5BA MOV ICA5BB A MOV ICA5BB A MOV ICA5BA MOV ICA5BA B MOV ICA5BA MOV ICA5BA B MOV ICA5BA MOV ICA5BA MOV ICA5BA B MOV ICA6BA B MOV ICA5BA B MOV ICA6BA B MOV ICA6BA B MOV ICA6BA B MOV ICABBA B	CA SYSTEM COMPONENTS	╀	Size (in.)	_	Seismic PRA	_	integrity only	_	Non-Safety
AOV ICA27A (32B) AOV ICA36AB AOV ICA36AB AOV ICA36AB AOV ICA52AB AOV ICA52AB AOV ICA5CA (44B) AOV ICA5CA (44B) AOV ICA5CA (44B) AOV ICA6AAB MOV ICA7AC B MOV ICA7AC B MOV ICA11A (9B) B MOV ICA15A (18B) C MOV ICA5BA (46B) A A B MOV ICA5AC A MOV ICA5BA MOV ICA5BB A MOV ICA5BB A MOV ICA5BA MOV ICA5BA B MOV ICA5BA MOV ICA5BA B MOV ICA5BA MOV ICA5BA MOV ICA5BA B MOV ICA6BA B MOV ICA5BA B MOV ICA6BA B MOV ICA6BA B MOV ICA6BA B MOV ICABBA B	AOV 1CA20AB	┢	6	_		\vdash		\vdash	
AOV ICA36AB AOV ICA52AB AOV ICA52AB AOV ICA52AB AOV ICA52AB AOV ICA5AA (44B) AOV ICA5AAB AOV ICA5AB AOV ICA5AB AOV ICA5ABB AOV ICA5ABB AOV ICA5ABB AOV ICA5ABB AOV ICA5ABBB AOV ICA5ABBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB			4						
AOV ICA52AB AOV ICA5AA (44B) AOV ICA5AA (44B) AOV ICA5AA (44B) AOV ICA6AAB MOV ICA7AC MOV ICA7AC MOV ICA11A (9B) B MOV ICA15A (18B) B MOV ICA5BA B MOV ICA5BA B MOV ICA5BA B MOV ICA5BB A MOV ICA5BB A MOV ICA5BB A MOV ICA5AAC A MOV ICA5AAC A MOV ICA6AAC A MOV ICA6AAC A MOV ICA6AAC B B B B MOV ICA6AAC B B B B MOV ICA6AAC B B B B B B MOV ICA6AAC B B B B B B B B B B B B B B B B B B	AOV 1CA36AB		4		-				
AOV ICA56A (44B) AOV ICA60A (40B) AOV ICA60A (40B) AOV ICA60A (40B) AOV ICA6AB MOV ICA7AC MOV ICA11A (9B) B MOV ICA15A (18B) AOV ICA38B AOV ICA50B AOV ICA50B AOV ICA50B AOV ICA54AC AOV ICA56A (40B) AOV ICA6AC AOV ICA6AC AOV ICA6AC AOV ICA6AC AOV ICA6AC AOV ICA6AC BOV ICA6AC AOV ICA6AC BOV ICA6AC	AOV 1CA48AB	Г	4			Г	***************************************	Т	
ACV 1CA60A (40B) ACV 1CA60AB MOV 1CA7AC B MOV 1CA11A (9B) B MOV 1CA38B ACV 1CA38B ACV 1CA53B ACV 1CA54AC ACV 1CA50B ACV 1CA50A (46B) ACV 1CA50A (46B) ACV 1CA50A (40B) ACV 1CA60AC ACV 4 ACV 1CA60AC ACV	AOV 1CA52AB		4						
ACV 1CA64AB	AOV ICA56A (44B)		4						
MOV 1CA1A (9B) MOV 1CA15A (18B) MOV 1CA38B MOV 1CA50B MOV 1CA54AC MOV 1CA54AC MOV 1CA56A (46B) MOV 1CA56A (46B) MOV 1CA56A (46B) MOV 1CA66AC MOV 1CA66A	AOV 1CA60A (408)		4						
MOV 1CA11A (9B) MOV 1CA15A (1BB) MOV 1CA50B MOV 1CA50B MOV 1CA50B MOV 1CA54AC MOV 1CA58A (46B) MOV 1CA58A (46B) MOV 1CA66AC MO	AOV 1CA64AB		4						
MOV 1CA11A (9B) MOV 1CA15A (1BB) MOV 1CA50B MOV 1CA50B MOV 1CA50B MOV 1CA54AC MOV 1CA58A (46B) MOV 1CA58A (46B) MOV 1CA66AC MO	MOV ICAZAC	-	0					_	
MOV 1CA15A (18B) MOV 1CA38B MOV 1CA50B MOV 1CA50B MOV 1CA54AC MOV 1CA54AC MOV 1CA58A (46B) MOV 1CA62A (22B) MOV 1CA62A (22B) MOV 1CA66AC MOV 1CA68AC M				Н		H			
MOV 1CA58B MOV 1CA50B MOV 1CA56AC MOV 1CA58A (46B) MOV 1CA58A (46B) MOV 1CA62A (42B) MOV 1CA66AC MOV 1		Н		Н		_		\vdash	
MOV 1CA50B MOV 1CA54AC MOV 1CA54AC MOV 1CA62A (42B) MOV 1CA62A (42B) MOV 1CA66AC MOV 1CA66BC MOV 1CA6BCC MOV 1CA6B		Н				_		_	
MOV 1CA58A (46B) MOV 1CA58A (42B) MOV 1CA62A (42B) MOV 1CA66AC MOV		┪		Н					
MOV 1CA62A (42B) MOV 1CA62A (42B) MOV 1CA66AC MOV 1CA66AC MOV 1CA86A (116B) IURBINE DRIVEN PUMP 1 (INCLUDING CONDENSATE EDUCTOR) IURBINE DRIVEN PUMP 1A (1B) MOTOR DRIVEN PUMP 1A (1B) MOTOR DRIVEN PUMP 1A (1B) MOTOR DRIVEN PUMP A (B) FROM GROUNDWATER DRAINAGE SUMP A (A) DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (In.) DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (In.) FUEL OIL DAY TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9		1				-		-	
MOV 1CA62A (42B) MOV 1CA66AC MOV 1CA66AC MOV 1CA86A (116B) FURBINE DRIVEN PUMP 1 (INCLUDING CONDENSATE EDUCTOR) FURBINE DRIVEN PUMP LUBE OIL HX MOTOR DRIVEN PUMP 1A (1B) MVZ SUMP PUMP A (B) FROM GROUNDWATER DRAINAGE SUMP A (A) DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (In.) FUEL OIL DAY TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9 AIR-OPERATED REGULATING VALVE 1KD9 4				-					
MOV 1CA66AC MOV 1CA86A (116B) RURBINE DRIVEN PUMP 1 (INCLUDING CONDENSATE EDUCTOR) RURBINE DRIVEN PUMP LUBE OIL HX MOTOR DRIVEN PUMP 1A (1B) WZ SUMP PUMP A (B) FROM GROUNDWATER DRAINAGE SUMP A (A) DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (In.) Selsmic PRA integrity only Non-Sofety D/G 1A (1B) X FUEL OIL DAY TANK 1A (1B) FUEL OIL STORAGE TANK 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B)		П							
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CONDENSATE EDUCTOR) FURBINE DRIVEN PUMP LUBE OIL HX MOTOR DRIVEN PUMP 1A (1B) WZ SUMP PUMP A (B) FROM GROUNDWATER DRAINAGE SUMP A (A) DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (In.) Seismic PRA Integrity only Non-Safety D/G 1A (1B) X FUEL OIL DAY TANK 1A (1B) FUEL OIL STORAGE TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B)	MOV 1CA86A (116B)		8						
CONDENSATE EDUCTOR) FURBINE DRIVEN PUMP LUBE OIL HX MOTOR DRIVEN PUMP 1A (1B) WZ SUMP PUMP A (B) FROM GROUNDWATER DRAINAGE SUMP A (A) DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (In.) Seismic PRA Integrity only Non-Safety D/G 1A (1B) X FUEL OIL DAY TANK 1A (1B) FUEL OIL STORAGE TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B)	TUDDINE DONGALDUNAD LUNGCUIDING	Н		_		_		_	
TURBINE DRIVEN PUMP LUBE OIL HX MOTOR DRIVEN PUMP 1A (1B) WZ SUMP PUMP A (B) FROM GROUNDWATER DRAINAGE SUMP A (A) DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (in.) Selsmic PRA integrity only Non-Safety D/G 1A (1B) X FUEL OIL DAY TANK 1A (1B) FUEL OIL STORAGE TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B)		Н		-		-			
MOTOR DRIVEN PUMP 1A (1B) WZ SUMP PUMP A (B) FROM GROUNDWATER DRAINAGE SUMP A (A) DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety D/G 1A (1B) X FUEL OIL DAY TANK 1A (1B) FUEL OIL STORAGE TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B)		Н		-		-		-	
DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (In.) FUEL OIL DAY TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B)		H		┥		-		-	
DIESEL GENERATOR AND SUPPORTING COMPONENTS Size (In.) Seismic PRA integrity only Non-Safety D/G 1A (1B) X FUEL OIL DAY TANK 1A (1B) FUEL OIL STORAGE TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) FUEL OIL TRANSFER PUMP 1A (1B) FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9 4		<u>Г</u>	PAINAGESI	 IM		\dashv		-	
COMPONENTS Size (In.) Seismic PRA integrity only Non-Safety D/G 1A (1B) X FUEL OIL DAY TANK 1A (1B) X FUEL OIL STORAGE TANK 1A (1B) X FUEL OIL BOOSTER PUMP 1A (1B) X FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 X (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) 4 AIR-OPERATED REGULATING VALVE 1KD9 4	WE SOME FORM A CONTROL OR CONDIVATED	П	NIIVOE 30		F A (A)	-			
COMPONENTS Size (In.) Seismic PRA integrity only Non-Safety D/G 1A (1B) X FUEL OIL DAY TANK 1A (1B) X FUEL OIL STORAGE TANK 1A (1B) X FUEL OIL BOOSTER PUMP 1A (1B) X FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 X (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) 4 AIR-OPERATED REGULATING VALVE 1KD9 4									
COMPONENTS Size (In.) Seismic PRA integrity only Non-Safety D/G 1A (1B) X FUEL OIL DAY TANK 1A (1B) X FUEL OIL STORAGE TANK 1A (1B) X FUEL OIL BOOSTER PUMP 1A (1B) X FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 X (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) 4 AIR-OPERATED REGULATING VALVE 1KD9 4	DIFFEL CENTRATOR AND REPROPERTY	\vdash	15.	_		_]	D-2-2 I	\sqcup	
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FUEL OIL DAY TANK 1A (1B) FUEL OIL STORAGE TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9 4	COMPONENTS	-	SIZE (IN.)		Seismic PRA	4	integrity only	-	Non-Safety
FUEL OIL STORAGE TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9 4	D/G 1A (18)				Х				
FUEL OIL STORAGE TANK 1A (1B) FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9 4	ELE OF DAY TANK 14 (19)			_		_		_	
FUEL OIL BOOSTER PUMP 1A (1B) FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9 4		Н	-	\dashv				-	
FUEL OIL FUEL TRANSFER FILTERS 1A1, 1A2 X (1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9 4		\vdash		-		-	 }	-	
(1B1, 1B2) FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9 4		H		-		-		-	
FUEL OIL TRANSFER PUMP 1A (1B) AIR-OPERATED REGULATING VALVE 1KD9 4		H				\dashv			
AIR-OPERATED REGULATING VALVE 1KD9 4		\vdash		\dashv				-	
	OLL OIL HOWING IN LOTH 177 (10)	Н		-		-		{	
	AIR-OPERATED REGULATING VALVE 1KD9	\vdash	4			-		ᅱ	
	(1KD29)	Н	-7						

TABLE 2 -

DIESEL GENERATOR AND SUPPORTINIS LIPB Included in Press Dridy. COMPONENTS (cont.) Size (in.) Seismic PRA Integrity only Non-Sofely (integrity only Non-Sofely Non-Sofely (integrity only Non-Sofely Non-Sofely Non-Sofely Non-Sofely (integrity only Non-Sofely Non-So	· .		IABLE 2	-					
Size (In.) Seismic PRA Integrity only Non-Sofety	DIESEL GENERATOR AND SUPPORTING	Т	Line		Included in		Press, bndry.	-	
KD D/G COOLING WATER HX 1A (1B) KD INTERCOOLER PUMP 1A (1B) KD SURGE TANK 1A (1B) MC SURGE TANK 1A (1B) MOV 1LD108 (113) LUBE OIL INTAKE STRAINER 1A (1B) LUBE OIL FILTER 1A (1B) VD D/G BLDG. VENTILATION FANS DSF-1A, IC (1B, ID) SOLENOID VALVE 1VG61 (69) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (88) SOLENOID VALVE 1VG64 (88) SOLENOID VALVE 1VG65 (AT (1B) VG STARTING AIR TANK 1A (1B) VG STARTING AIR TANK 1A (1B) VG GONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VG LINE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) AIR	COMPONENTS (cont.)	Г	Size (In.)	_					Non-Safety
KD INTERCOCULER PUMP 1A (1B) KD JACKET WATER PUMP 1A (1B) KD JACKET WATER PUMP 1A (1B) JCJ INTERCOCULER 1A (1B) MOV 1LD108 (113) MOV 1LD		1		_					
KD INTERCOCULER PUMP 1A (1B) KD JACKET WATER PUMP 1A (1B) KD JACKET WATER PUMP 1A (1B) JCJ INTERCOCULER 1A (1B) MOV 1LD108 (113) MOV 1LD	KD D/G COOLING WATER HX 1A (1B)	Г		_		٦			
KD JACKET WATER PUMP 1A (1B) KD SURGE TANK 1A (1B) D/G INTERCOCLER 1A (1B) MOV ILD108 (113) MOV ILD108 (113) LUBE OIL INTAKE STRAINER 1A (1B) VD D/G BLDG. VENTIKATION FANS DSF-1A. IC (1B, 1D) SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (69) 2 SOLENOID VALVE 1VG64 (69) 2 SOLENOID VALVE 1VG64 (69) 2 VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG UNE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG LINE PURIFIERS 1A1, 1A2 (1B1, 1B2) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN		T		-					
KD SURGE TANK 1A (1B) D/G INTERCOCLER 1A (1B) MOV 1LD108 (113) LUBE OIL INTAKE STRAINER 1A (1B) LUBE OIL INTER 1A (1B) VD D/G BLDG. VENTILATION FANS DSF-1A, IC (1B, 1D) SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG62 (66) 2 SOLENOID VALVE 1VG63 (67) 2 SOLENOID VALVE 1VG63 (67) 2 SOLENOID VALVE 1VG64 (68) X		T		-				•	
D/G INTERCOCLER 1A (1B) MOV 1LD108 (113) 4 X LUBE OIL INTAKE STRAINER 1A (1B) LUBE OIL FILTER 1A (1B) LUBE OIL COOLER 1A (1B) VD D/G BLDG. VENTILATION FANS DSF-1A, 1C (1B, 1D) SOLENCID VALVE 1VG60 (65) SOLENCID VALVE 1VG63 (67) SOLENCID VALVE 1VG63 (67) SOLENCID VALVE 1VG63 (67) SOLENCID VALVE 1VG64 (68) VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG UNE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG LINE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG LINE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG LINE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG LINE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B)		\vdash	 	_		٦		_	
MOV 1LD108 (113) LUBE OIL INTAKE STRAINER 1A (1B) LUBE OIL FILTER 1A (1B) VD D/G BLDG, VENTILATION FANS DSF-1A, 1C (1B, 1D) SOLENCID VALVE 1VG61 (65) SOLENCID VALVE 1VG62 (66) SOLENCID VALVE 1VG62 (66) SOLENCID VALVE 1VG63 (67) SOLENCID VALVE 1VG64 (68) VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG GONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) VN AIR FILTER 1A (1B) VN AIR FILTER 1A (1B) VN AIR SILENCER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) VN AIR FILTER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) VN AIR FILTER 1A (1B) VN AIR FILTER 1A (1B) VN AIR SHAUST SILENCER 1A (1B) NOV 1FW1A MOV 1FW32B MOV 1FW33A MOV 1FW33A MOV 1FW33A MOV 1FW33A MOV 1FW33A MOV 1FW33A		\vdash		_	 	ᅱ			
LUBE OIL INTAKE STRAINER 1A (1B) LUBE OIL FILTER 1A (1B) VD D/G BLDG. VENTILATION FANS DSF-1A, 1C (1B, 1D) SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG62 (66) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (68) 2 VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG INTAKE AIR AFTERCOOLERS AND DRYERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST S		1		_		┪		_	
LUBE OIL INTAKE STRAINER 1A (1B) LUBE OIL FILTER 1A (1B) VD D/G BLDG. VENTILATION FANS DSF-1A, 1C (1B, 1D) SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG62 (66) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (68) 2 VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG INTAKE AIR AFTERCOOLERS AND DRYERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST S	MOV 1LD108 (113)	1	4	_	 	ᅥ	×	-	
LUBE OIL FILTER 1A (1B) LUBE OIL COOLER 1A (1B) VD D/G BLDG. VENTILATION FANS DSF-1A, 1C (1B, 1D) SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG62 (66) 2 SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (68) 2 SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (68) 2 SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (68) 2 SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (68) 2 SOLENOID VALVE		1	1	_		7			
LUBE OIL COOLER 1A (1B) VD D/G BLDG. VENTILATION FANS DSF-1A, 1C (1B, 1D) SOLENCID VALVE 1VG61 (65) SOLENCID VALVE 1VG62 (66) SOLENCID VALVE 1VG63 (67) SOLENCID VALVE 1VG64 (68) 2 SOLENCID VALVE 1VG64 (68) 2 SOLENCID VALVE 1VG64 (68) 2 VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG INTAKE AIR AFTERCOOLERS AND DRYERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR RITER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) ZD VACUUM BLOWER PACKAGE 1A (1B) MOV 1FW1A MOV 1FW1A MOV 1FW1A MOV 1FW3B		┢				7		၂	
VD D/G BLDG, VENTILATION FANS DSF-1A, 1C (18, 1D) SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG62 (66) SOLENOID VALVE 1VG62 (66) SOLENOID VALVE 1VG62 (66) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (68) VG STARTING AIR TANKS 1A1, 1A2 (181, 182) VG STARTING AIR TANKS 1A1, 1A2 (181, 182) VG CONTROL AIR VOLUME TANK 1A (18) VG AIR COMPRESSORS 1A1, 1A2 (181, 182) VG CONTROL AIR FILTER 1A (18) VN AIR INTAKE SILENCER 1A (18) VN AIR INTAKE SILENCER 1A (18) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN AIR WALVE THE PROPRIET OF THE PROPRI		\vdash				┪		ᅱ	
SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG62 (66) SOLENOID VALVE 1VG62 (66) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (68) VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG INTAKE AIR AFTERCOOLERS AND DRYERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPESSORS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) X ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press. bndry. X X MOV 1FW1A B MOV 1FW1A B MOV 1FW33A 1 2 MOV 1FW33A MOV 1FW49B 1 2 MOV 1FW49B		┪				1		٦	
SOLENOID VALVE 1VG61 (65) SOLENOID VALVE 1VG62 (66) SOLENOID VALVE 1VG62 (66) SOLENOID VALVE 1VG63 (67) SOLENOID VALVE 1VG64 (68) VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG STARTING AIR TANKS 1A1, 1A2 (1B1, 1B2) VG INTAKE AIR AFTERCOOLERS AND DRYERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPESSORS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) X ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press. bndry. X X MOV 1FW1A B MOV 1FW1A B MOV 1FW33A 1 2 MOV 1FW33A MOV 1FW49B 1 2 MOV 1FW49B	VD DIG BIDG. VENTILATION FANS DSF-1A	ែ	(18.10)	_		7		┪	
SOLENCID VALVE 1VG62 (66) SOLENCID VALVE 1VG63 (67) SOLENCID VALVE 1VG64 (68) SOLENCID VALVE 1VG64 (68) VG STARTING AIR TANKS 1A1, 1A2 (181, 182) VG INTAKE AIR AFTERCOOLERS AND DRYERS 1A1, 1A2 (181, 182) VG CONTROL AIR VOLUME TANK 1A (18) VG LINE PURIFIERS 1A1, 1A2 (181, 182) VG CONTROL AIR FILTER 1A (18) VN AIR INTAKE SILENCER 1A (18) VN AIR INTAKE SILENCER 1A (18) VN AIR INTAKE SILENCER 1A (18) VN AIR EXHAUST SILENCER 1A (18) VN AIR EXHAUST SILENCER 1A (18) X ZD VACUUM BLOWER PACKAGE 1A (18) FW SYSTEM COMPONENTS Size (in.) Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 MOV 1FW1A 14 MOV 1FW33A 12 MOV 1FW33A 20 MOV 1FW49B	15 575 525 C. 121115 WORTH 110 501 111,	ï	1	_		7		-	
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SOLENCID VALVE 1VG63 (67) SOLENCID VALVE 1VG64 (68) VG STARTING AIR TANKS 1A1, 1A2 (181, 182) VG INTAKE AIR AFIERCOOLERS AND DRYERS 1A1, 1A2 (181, 182) VG CONTROL AIR VOLUME TANK 1A (18) VG AIR COMPRESSORS 1A1, 1A2 (181, 182) VG CONTROL AIR FILTER 1A (18) VN AIR INTAKE SILENCER 1A (18) VN AIR INTAKE SILENCER 1A (18) VN AIR EXHAUST SILENCER 1A (18) VN D/G SUMP PUMPS 1A2, 1A3 (182, 183) ZD VACUUM BLOWER PACKAGE 1A (18) X Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA integrity only Non-Safety MOV 1FW1A 8 MOV 1FW3AA 14 MOV 1FW33A 2 MOV 1FW33A 2 MOV 1FW49B		┢	1 2	-		-		٦	
SOLENOID VALVE 1VG64 (68) VG STARTING AIR TANKS 1A1, 1A2 (181, 182) VG INTAKE AIR AFTERCOOLERS AND DRYERS 1A1, 1A2 (181, 182) VG CONTROL AIR VOLUME TANK 1A (18) VG AIR COMPRESSORS 1A1, 1A2 (181, 182) VG UNE PURIFIERS 1A1, 1A2 (181, 182) VG CONTROL AIR FILTER 1A (18) VN AIR INTAKE SILENCER 1A (18) VN AIR EXHAUST SILENCER 1A (18) VN AIR EXHAUST SILENCER 1A (18) X ZD VACUUM BLOWER PACKAGE 1A (18) FW SYSTEM COMPONENTS Size (in.) Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW12A MOV 1FW12A MOV 1FW32B 8 MOV 1FW33A 2 MOV 1FW33A MOV 1FW33A MOV 1FW33A MOV 1FW349B 2 MOV 1FW49B		\vdash		_	 	-		4	
VG STARTING AIR TANKS 1A1, 1A2 (181, 182) X VG INTAKE AIR AFTERCOOLERS AND DRYERS 1A1, 1A2 X (181, 182) X VG CONTROL AIR VOLUME TANK 1A (1B) X VG AIR COMPRESSORS 1A1, 1A2 (181, 182) X VG LINE PURIFIERS 1A1, 1A2 (181, 182) X VG CONTROL AIR FILTER 1A (1B) X VN AIR INTAKE SILENCER 1A (1B) X VN AIR EXHAUST SILENCER 1A (1B) X WN D/G SUMP PUMPS 1A2, 1A3 (182, 183) X ZD VACUUM BLOWER PACKAGE 1A (1B) X Eline Included in Press. bndry. FW SYSTEM COMPONENTS Sze (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 MOV 1FW27A 14 MOV 1FW32B 8 MOV 1FW33A 2 MOV 1FW49B 2 MOV 1FW49B 2		H			┟╧╾╼┼	7		7	
VG INTAKE AIR AFTERCOOLERS AND DRYERS 1A1, 1A2 X (1B1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) X VG LINE PURIFIERS 1A1, 1A2 (1B1, 1B2) X VG CONTROL AIR FILTER 1A (1B) X VN AIR INTAKE SILENCER 1A (1B) X VN AIR EXHAUST SILENCER 1A (1B) X VN D/G SUMP PUMPS 1A2, 1A3 (1B2, 1B3) X ZD VACUUM BLOWER PACKAGE 1A (1B) X Eline Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA integrity only MOV 1FW1A 8 MOV 1FW27A 14 MOV 1FW32B 8 MOV 1FW33A 2 MOV 1FW49B 2		\vdash	-		 x - 	7		7	
(IB1, 1B2) VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG UNE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN D/G SUMP PUMPS 1A2, 1A3 (1B2, 1B3) ZD VACUUM BLOWER PACKAGE 1A (1B) Line Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 MOV 1FW3A 14 MOV 1FW3A 2 MOV 1FW33A 2 MOV 1FW33A		ÌΑ	1 142	_		┪		1	×
VG CONTROL AIR VOLUME TANK 1A (1B) VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG UNE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) WN D/G SUMP PUMPS 1A2, 1A3 (1B2, 1B3) ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 MOV 1FW27A 14 MOV 1FW33A 2		Ϊ̈́	1,1,42			┪		7	
VG AIR COMPRESSORS 1A1, 1A2 (1B1, 1B2) VG LINE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) X WN D/G SUMP PUMPS 1A2, 1A3 (1B2, 1B3) ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA integrity only Non-Safety MOV 1FW1A MOV 1FW27A MOV 1FW33A MOV 1FW33A MOV 1FW49B 2 MOV 1FW49B		┢	 	_		┪	-	-1	
VG LINE PURIFIERS 1A1, 1A2 (1B1, 1B2) VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) WN D/G SUMP PUMPS 1A2, 1A3 (1B2, 1B3) ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press bndry. FW SYSTEM COMPONENTS Size (in.) MOV 1FW1A MOV 1FW27A MOV 1FW32B MOV 1FW33A MOV 1FW49B 2 MOV 1FW49B 2 MOV 1FW49B	VG AID COMPRESSORS IA1 1A2 (1R1 1R2)	┢	 	_		7		-	Y
VG CONTROL AIR FILTER 1A (1B) VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) VN D/G SUMP PUMPS 1A2. 1A3 (1B2, 1B3) ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA integrity only Non-Safety MOV 1FW1A MOV 1FW27A MOV 1FW32B MOV 1FW33A MOV 1FW39B Z MOV 1FW49B Z MOV 1FW49B		┢	 	-		7		1	
VN AIR INTAKE SILENCER 1A (1B) VN AIR EXHAUST SILENCER 1A (1B) WN D/G SUMP PUMPS 1A2. 1A3 (1B2, 1B3) ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A MOV 1FW27A MOV 1FW32B MOV 1FW33A 2 MOV 1FW33A 2 MOV 1FW49B 2		┢				+		7	
VN AIR EXHAUST SILENCER IA (1B) WN D/G SUMP PUMPS 1A2. 1A3 (1B2, 1B3) ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) MOV 1FW1A MOV 1FW27A MOV 1FW32B MOV 1FW33A MOV 1FW498 Z MOV 1FW498 Z MOV 1FW498 Z MOV 1FW498	TO CONTINUE FIRM TIESEN IN THE	\vdash	 	-		+		1	
VN AIR EXHAUST SILENCER IA (1B) WN D/G SUMP PUMPS 1A2. 1A3 (1B2, 1B3) ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) MOV 1FW1A MOV 1FW27A MOV 1FW32B MOV 1FW33A MOV 1FW498 Z MOV 1FW498 Z MOV 1FW498 Z MOV 1FW498	VN AIR INTAKE SILENCER 1A (18)					┪		1	X
WN D/G SUMP PUMPS 1A2, 1A3 (1B2, 1B3) ZD VACUUM BLOWER PACKAGE 1A (1B) Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A MOV 1FW27A MOV 1FW32B MOV 1FW33A MOV 1FW49B Z						7		7	
ZD VACUUM BLOWER PACKAGE 1A (18) Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A MOV 1FW27A MOV 1FW32B MOV 1FW33A MOV 1FW33A MOV 1FW49B Z MOV 1FW49B	111111111111111111111111111111111111111	┢				7	·	7	
ZD VACUUM BLOWER PACKAGE 1A (18) Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A MOV 1FW27A MOV 1FW32B MOV 1FW33A MOV 1FW33A MOV 1FW49B Z MOV 1FW49B	WN D/G SUMP PUMPS 1A2 1A3 (1R2 1R3)		 	_		1		+	Y
Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 Indeprity only Non-Safety MOV 1FW27A 14 Indeprity only Non-Safety MOV 1FW32B 8 Indeprity only Non-Safety MOV 1FW33A 2 2 Indeprity only Non-Safety	77.7.27.27.27.27.27.27.27.27.27.27.27.27	\vdash	 	7		+		7	
Line Included in Press. bndry. FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 Indeprity only Non-Safety MOV 1FW27A 14 Indeprity only Non-Safety MOV 1FW32B 8 Indeprity only Non-Safety MOV 1FW33A 2 2 Indeprity only Non-Safety	7D VACUUM BLOWER PACKAGE 1A (18)	┢		-		+		┪	<u> </u>
FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 <	LO THOUGH GLOTTER THOUGH IT (10)	H	 	-		7		7	
FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 <		┢	 	-		┪		┪	
FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 <		一	 			+		+	
FW SYSTEM COMPONENTS Size (in.) Seismic PRA Integrity only Non-Safety MOV 1FW1A 8 <		┢╾	line	-	Included in	+	Pross haday	+	 -
MOV 1FW1A 8	FW SYSTEM COMPONENTS	一		-		+		+	Non-Safety
MOV 1FW27A 14 14 1 14 1 14 1 14 1 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15	THE OFFICE OF COMM CAREFUL		320 (II I.)	-	COMMING FRA	+	" "Odini Oini	+	. torr building
MOV 1FW27A 14 14 1 14 1 14 1 14 1 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15	MOV IFWIA	-	T A	_		+		+	
MOV 1FW32B 8		-	 	-		4		+	
MOV 1FW33A 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		\vdash		-		+		┪	
MOV 1FW498 · 2		1		-	 	┪		4	
		\vdash		-		+		+	
REFUELING WATER STORAGE TANK (FWST) X	17 V 17 V4470	-				-		4	
INCLUDING WAILS GLORAGE IAWA (LAST)	DEFLIELING WATER STORAGE TANK (CLASE)	┝	 	_	 	-{		4	
	MELOFOLIA AVIEW SIOWAGE INIAN (LAASI)	┝	 	_	 ^ 	4		4	
		├	 	_	ļ	4		4	~~~~~~~
		┡	 	_	 	4		4	
<u> </u>		┡	 			4		_	
		L.	<u> </u>		L	_			

TABLE 2 -

		IADLE 2				_	
		Line		Included In	Press. bn	dry.	
KC SYSTEM COMPONENTS		Size (in.)		Seismic PRA	Integrity of		Non-Safety
AOV 1KC57A (82B)		12					<u> </u>
	_						
MOV IKCIA (28)	_	20	_		 		_
MOV 1KC3A (18B)		10	-			-	
MOV 1KC50A (53B)		20	-				
MOV IKCSIA (54B)						├-	
MOV 1KC56A (81B)		4	-		×		
	}	16	-	ļ			-}
MOV 1KC230A (228B)		8	-				
			_		<u> </u>		
KC HX 1A (1B)	_ _		_	X			
KC PUMPS 1A1, 1A2 (1B1, 1B2)			_	X			
UNIT 1 KC SURGETANK							
RHR PUMP MECH. SEAL HX 1A (1B)	_L						
							1
			٦		1		
			٦				
		Line	٦	Included in	Press. bno	iv.	
NC SYSTEM COMPONENTS	_	Size (in.)	7	Seismic PRA	integrity o		Non-Safety
		0=0 (::::)	7	00.00	1	***/	7.0 50.0.7
PZR PORV INC32B		3	-	X		—- ·	
PZR PORV INC34A		3	-1	- Â			
PZR PORV INC36B			-	^		-+	
PZR PORV TNC308		3	-	^	 	}-	
ALTER DEUTE VALUE VALUE	-		4				
SAFETY RELIEF VLV INCI		6					
SAFETY RELIEF VLV INC2	-	6	4		 		
SAFETY RELIEF VLV 1NC3		6	4		 		
			4				
MOV INC31B		3	_				<u> </u>
MOV INC33A		3 .			<u> </u>		
MOV INC358		3					
			٦				
			T		1		1
	\neg	Line	┪	Included in	Press. bno	irv.	
ND SYSTEM COMPONENTS	1	Size (in.)	7	Seismic PRA	integrity o		Non-Safety
The Original Control	-	020 (11.7)	7	30001110 1101	1	****	110110017
AOV 1ND29 (14)			_1				
AUV INDZY (14)			1				1
		8	-		X #		
AOV IND34		8 8			X #		
AOV IND34		8			X #		
AOV IND34 MOV IND1B		14			X #		
AOV IND34 MOV IND1B MOV IND2AC		14 14			X #		
MOV IND18 MOV IND2AC MOV IND19A (4B)		14 14 14			X #		
AOV 1ND34 MOV 1ND18 MOV 1ND2AC MOV 1ND19A (4B) MOV 1ND30A (15B)		14 14 14 14 8			X #		
MOV IND18 MOV IND2AC MOV IND19A (4B)		14 14 14			X		
AOV 1ND34 MOV 1ND18 MOV 1ND2AC MOV 1ND19A (4B) MOV 1ND30A (15B) MOV 1ND32 (17)		8 14 14 14 8 2			X # X # X		
AOV 1ND34 MOV 1ND18 MOV 1ND2AC MOV 1ND19A (4B) MOV 1ND30A (15B) MOV 1ND32 (17) MOV 1ND33 (18)		14 14 14 14 8 2 8			X		
AOV 1ND34 MOV 1ND18 MOV 1ND2AC MOV 1ND19A (4B) MOV 1ND30A (15B) MOV 1ND32 (17)		8 14 14 14 8 2			X # X # X		

TABLE 2 -

		TABLE 2 -	•					
	I	Line		Included in		Press. bndry.		
ND SYSTEM COMPONENTS (cont.)	I	Size (in.)		Seismic PRA		integrity only		Non-Safety
110111111111111111111111111111111111111	4				_		<u> </u>	
MOV 1ND68A (67B)	+-	2	_			*	L	
ND PUMP 1A (1B)	┿	 	_				┝	
ND HX 1A (1B)	┿	 	-	X	_	#	-	
NO FA (ID)	╁	 	_		_		-	
	十		-					
	十	 	_				_	
	1	Line		included in	-	Press. bndry.	_	
NI SYSTEM COMPONENTS	1	Size (in.)		Selsmic PRA	_	integrity only	П	Non-Safety
AOV INI50		1				X		
AOV 1NI56	\perp	1				X		
AOV 1NI57	\perp	0.75				X		
AOV INI58	┺	0.75	_		_	X		
AOV 1N/61	╁_		_		_	X	_	
AOV 1NI67	_	1	_		_	X	_	
AOV INI68	╄	0.75	_		_	X		
AOV INI69	-	0.75	_			X	_	
AOV 1NI72	╄		_		_	X	_	
AOV INI78	-	1 075	_		-	X	Щ	
AOV INI79	╀	0.75	-		_	X	-	
AOV INI80 AOV INI84	╀	0.75 1			-	X	-	
AOV INI64 AOV INI90	╁╴	 	-		-	x	-	
AOV INI91	╬	0.75	\dashv		-	- x	-	
AOV INI92	╆	0.75	-		-	- x	┪	
AOV INI163	╁	0.75	-		H	x	-	
AOV 1N174 (179)	十	0.75				x	_	
	1							
MOV 1NI9A (10B)	1	4				#		-
MOV 1NI54A	T	10				X ∌		
MOV INI65B		10				X #		
MOV INI76A	T	10				#		
MOV INI88B		10				#		
MOV_INI100B	L	- 8				X		
MOV 1NI103A (135B)		6				X		
MOV 1NI115B (144B)	L	1.5				X		
MOV INI118A (150B)		4				X		
MOV 1NI121A (152B)	L	4				X		
MOV INI136B	L	6						
MOV INI147A		2				X		
MOV 1NI162A		4				X		•
MOV 1N1173A (178B)		8						
MOV INI183B		12	_]			X		
MOV 1NI185A (184B)	L	18						
MOV INI332A		6	J					
MOV 1NI3338	Ĺ	6						
 required to function during cold shute 	dou	/n ·						

TABLE 2 -

		IABLE 2 -						
	Π	Line		included in		Press. bndry.	Γ	1
NI SYSTEM COMPONENTS (cont.)		Ste (in.)		Seismic PRA		Integrity only		Non-Safety
	L							
MOV INI334B	L	6				X		
1NI430A (NITROGEN BACKUP TO PZR PORVS)		0.75		X				
INM31B (NITROGEN BACKUP TO PZR PORVs)		0.75		Х				
	T							
NI PUMP 1A (18)	$oxed{L}$			Х			_	
(not needed for inventory control for 1° SBI	ĹŌ	CA)						
COLD LEG ACCUMULATORS				X			_	
(not needed for 1" SBLOCA)								
	L							
	L	Une		Included in		Press. bndry.		
NS SYSTEM COMPONENTS	L	Size (in.)		Selsmic PRA	\int	integrity only		Non-Safety
					_[
MOV 1NS43A (38B)	L	8						
	L						_	
SPRAY NOZZLES DOWNSTREAM OF 1NS47 (42)	_	<u> </u>					_	
	L					•		
•	L							
· · · · · · · · · · · · · · · · · · ·	L				┛			
	L	Line		Included in	_	Press. bndry.	_	
NV SYSTEM COMPONENTS	L	Stze (in.)		Seismic PRA	_	integrity only		Non-Safety
	_			·	1		أ	
AOV 1NV238	L	3 3	_		_]	X	_	
AOV INV241	L	3	_		1	X	_	
	<u> </u>		4		4		_	
MOV INV94AC	L	4	4		4			
MOV INV95B	ļ.,	4	4		4		_	
MOV INVIAIA	L	4	4		4	X	_	
MOV INV1428	<u> </u>	4	4		4	X	_	
MOV INVI50B	_	2	_		4	X	_	
MOV INVISIA	L	2	┛		┙	Х	_	
MOV INV221A	_	8	_		4		_	
MOV 1NV222B	L	8	_		_			
MOV INV244A	L	3			_]			
MOV 1NV245B	L	3	_		1			
	L		_		1			
CENTRIFUGAL CHARGING PUMP 1A (1B)	L		╛	X	_[
SEAL WATER HX 1	L					X		
SEAL WATER INJECTION FILTER 1A (1B)	L				_[Х		•
SEAL WATER RETURN FILTER 1	L		\int		\rfloor	Х		
VOLUME CONTROL TANK 1	Ĺ		J	X	J	Х		
(not needed for inventory control for 1" SBI	0	CA)	I		T			
REGENERATIVE HEAT EXCHANGER			Ţ	X	T	X		
(not needed for inventory control for 1' SBI	O.	CA)			1			
			1		7			
	_		٦f		+		-	

TABLE 2 -

		TABLE 2 -	•				
		Line		Included in	Press. bndry.		•
RN SYSTEM COMPONENTS		Size (in.)		Seismic PRA	integrity only		Non-Safety
	-		-		9		
AOV 1RN21A (25B) .	Н	6	_		 		
AOV 1RN22A (26B)		6					
AOV 1RN68A (161B)		1.5	_			ᅦ	
AOV 1RN89A (190B)		20	7				
AOV 1RN103A (204B)		3?	-			-	
AOV 1RN112A (213B)	Н	2	-			┪	
AOV 1RN114A (215B)	Н	2	-		X	7	
AOV 1RN117A (218B)		2	-				
AQV 1RN126A (227B)		2	_		X	7	
AOV IRN130A (231B)	_	2	٦			7	
AOV 1RN140A (240B)		4			X	┪	
AOV IRN166A (170B)	Н	2	-		 	7	
AOV IRN2528	-	6	┪		X	一	
AOV 1RN2778		6	\dashv		X	一	
AOV 1RN442 (445)	H	4	-		X	7	
ACV IRVIAZ (AO)			_			_	
MOV IRNI	-	42	٦		Х	-	
MOV ORN2B		36	-		X	┪	
MOV ORNSA	Н	36	-		X	┪	
MOV ORNAC		36	-		X		
MOV ORNSB		36	-		X	┪	
MOV ORN7A (9B)	-	36	\neg			7	
MOV ORNIOAC	_	36	┪			7	
MOV ORNI IB	Н	36	٦,			\neg	
MOV ORNIZAC	-	36	-				
MOV DRN13A	_	36	-		- 	ᅱ	
MOV DRN14A (15B)	·	36	⊣		×	7	
MOV 1RN16A (18B)	_	36			X	7	
MOV IRN40A	-	10			X	-	
MOV IRN41B (43A)	Н	10	_				
MOV 1RN42A	 -	10					
MOV 1RN63B	Н	10	_		X		
MOV 1RN64A	-	10			X	_	
MOV 1RN69A (162B)	-	8	_			-	
MOV 1RN70A (171B)	_	8			<u> </u>		
MOV 1RN73A (174B)	一	В			X		
MOV 1RN86A (187B)	-	20			 		
MOV 1RN134A (235B)	Ι-	18		 	X	-	
MOV 1RN134A (2338)	⊢	18			$\frac{\hat{x}}{x}$		
MOV 0RN147AC (283AC)	\vdash	36			 	\vdash	
MOV 0RN148AC (2848)	┝		_				
	-	36		 		Н	
MOV 0RN149A (1528)		36		 	+		
MOV 0RN150A (1518)	-	36		 	X	\dashv	
MOV 1RN253A		6			X	Н	
MOV 1RN276A	<u> </u>	6		<u> </u>	X	Н	
MOV IRN279B	<u> </u>	6			X	Щ	
MOV 1RN296A (297B)	 _	36			X		
MOV IRN299A	L	6 · 1	_	l	X	يــا	

TABLE 2 -

·		IABLE 2	•				
	Τ	Line		Included in	Press. bndry.	Γ	
RN SYSTEM COMPONENTS (cont.)	T	Ste (in.)		Seismic PRA	integrity only		Non-Safety
	T						
MOV 0RN301AC	7	24			X		
MOV 0RN302B	7	24	_		Х		
	1						
RN PUMP IA (1B)	\top			X		П	
RN STRAINER 1A (1B)	1					П	
STANDBY NUCLEAR SERVICE WATER POND	\top			Х		Н	
	1				 	\vdash	
	\top						
		Line		Included in	Press. bndry.	Н	
SA, SM, SV COMPONENTS	1	Size (in.)		Seismic PRA	integrity only		Non-Safety
	7			33	1	Н	
AOV ISA49AB (48AB)	1	6	_		1	H	
	1-						
STEAM STOP VALVE TO TOP - 1SA3	1	3			1	H	
STEAM CONTROL VALVE TO TOP - 1SA4	1	3	-			Н	
	1-	`			<u> </u>	\dashv	
MSIV ISMIAB	┲	34	-		†··	\vdash	
MSIV ISM3AB	+-	34	닉		 	Н	
MSIV 1SM5AB	++	34	ㅓ		 	Н	
MSIV 15W7AB	+-	34	-		 	Н	
IAIMA (OIAI) UD	+		-		 	\vdash	
MSI BYPASS VLV ISM9AB	+	3	-1		1	-1	
MSI BYPASS VLV ISMIQAB	+	3	-1				
MSI BYPASS VLV 1SM11AB	+	3	┪	-	 		
MSI BYPASS VLV 1SM12AB	+	3	-1				
IVISI BIPASS VLV ISIVITZAD	+		-		 		
AOV ISM78	╂┩	2	-		X		
AOV ISM83		2	-		 	-1	
AOV 15M84	┿┥	2	-{		X		<u> </u>
	-├		-		 ^-		
AOV 18M89	\perp	2	- 1		1 1	١ ١	
AOV ISM90			-1		7		
AOV 18M95	┦┤	2			Х		
AOV 1SM96	\pm	2 2		·			
4.014 1014101		2 2 2			X		
AOV 1SM101		2 2					
		2 2 2 . 2 . 2			X		
SG PORV 1SV1AB		2 2 2 . 2 . 2 . 6		X	X		
SG PORV 1SV1AB SG PORV 1SV7AB		2 2 2 . 2 . 5 6		X X	X X X		
SG PORV 1SV1AB SG PORV 1SV7AB SG PORV 1SV13AB		2 2 2 . 2 . 2 . 6 . 6		X X X	X X X		
SG PORV 1SV1AB SG PORV 1SV7AB		2 2 2 . 2 . 5 6		X X	X X X		
SG PORV 1SV1AB SG PORV 1SV7AB SG PORV 1SV13AB SG PORV 1SV19AB		2 2 2 . 2 . 2 . 6 . 6		X X X	X X X X		
SG PORV 1SV1AB SG PORV 1SV7AB SG PORV 1SV13AB SG PORV 1SV19AB SG SRV 1SV2		2 2 2 . 2 . 2 . 6 . 6		X X X	X X X		
SG PORV 1SV1AB SG PORV 1SV7AB SG PORV 1SV13AB SG PORV 1SV19AB		2 2 2 . 2 . 6 6 6 6		X X X	X X X X		
SG PORV 1SV1AB SG PORV 1SV7AB SG PORV 1SV13AB SG PORV 1SV19AB SG SRV 1SV2		2 2 2 . 2 . 6 . 6 . 6		X X X	X X X X		
SG PORV 1SV1AB SG PORV 1SV7AB SG PORV 1SV13AB SG PORV 1SV19AB SG SRV 1SV2 SG SRV 1SV3 SG SRV 1SV4		2 2 2 . 2 . 6 . 6 . 6 . 6 . 6		X X X	X X X X X		
SG PORV 1SV1AB SG PORV 1SV7AB SG PORV 1SV13AB SG PORV 1SV19AB SG SRV 1SV2 SG SRV 1SV3 SG SRV 1SV4 SG SRV 1SV5		2 2 2 . 2 . 5 . 6 . 6 . 6 . 6 . 6 . 6		X X X	X X X X X X		
SG PORV 1SV1AB SG PORV 1SV7AB SG PORV 1SV13AB SG PORV 1SV19AB SG SRV 1SV2 SG SRV 1SV3 SG SRV 1SV4		2 2 2 . 2 . 6 . 6 . 6 . 6 . 6		X X X	X X X X X		

TABLE 2 -

		IABLE 2						
	$oxed{\mathbb{I}}$	Line		Included in		Press. bndry.		
SA, SM, SV COMPONENTS (cont.)	Τ	Size (in.)		Seismic PRA		integrity only		Non-Safety
	T				Т		Γ	l .
SG SRV 15V10	T	6				X		
SG SRV 15V11	T	6				X	Г	
SG SRV 1SV12	T	6	_			X		
SG SRV 15V14	\top	6				X	<u> </u>	
SG SRV 1SV15	\top	6			٦	X	Ι.	
SG SRV 15V16	T	6	_		7	X	-	
SG SRV 1SV17	十	6	7		7	X		
SG SRV 1SV18	1	6		 -		Х	┢	
SG SRV 1SV20	1	6	T		7	X	-	
SG SRV 1SV21	t	6			┪	X	_	
SG SRV 1SV22	十	6	-		\neg	X	Г	
SG SRV 1SV23	T	6	_		ᅥ	X		
SG SRV 1SV24	十	6	_		ヿ	X	_	
	✝				7			
MOV 1SV25	T	6			7	Х	_	
MOV ISV26	T	6	┪		一	X	-	
MOV 1SV27	十	6	_		ㅓ	X	-	
MOV 15V28	十	.6	ᅥ		┪	X.	-	
	十		_		ᅱ		-	
	╁	 	\neg	 	ᅱ		-	
	十	 	┪		┨		_	
	\vdash	Line	\dashv	Included in	-	Press. bndry.	-	
VA SYSTEM COMPONENTS - #	╁	Size (in.)	ᅱ	Seismic PRA	-	integrity only	-	Non-Safety
TA STOLLY COM CILENTS - F	╁╌	SEG (41.7)	-	SEMINIC FRA	-	uneginy Cruy	-	HOIFGGIETY
AIR-OP DAMPER 1-ABF-D-1	╆	 	-		-{			Х
AIR-OP DAMPER 1-ABF-D-2	一	 	┪		┪			$\frac{\lambda}{x}$
AIR-OP DAMPER 1-ABF-D-3	╁╌		-1		+		-	X
AIR-OP DAMPER 1-ABF-D-4A (5A)	├-	 	-		┪		-	-
AIR-OP DAMPER 1-ABF-D-4B (5B)	╁		-		-		-	$-\hat{x}$
AIR-OF DAMER PADI-D-40 (00)	┰		-{		┥		-	
AUX. BLDG. FILTERED EXHAUST FAN ABFXF-	늤	(19)	-		4			
AUX. BLDG. FILTER UNIT ABFU-1 (2)	台	(פו)			┥			<u>х</u>
RHR PUMP MOTOR AHU RHR-AHU-1A (1B)	⊢		-		4	X	_	^_
KHR PUMP MUTUR AND KHR-AND-TA (18)	╄	ļļ.	-		4			
	╄	 	-		-{			
	⊢	<u> </u>	_		4		_	
	╄		4		_[_	
	L	-Line	_]	Included in	4	Press. bndry.		
VC SYSTEM COMPONENTS - #	<u> </u> _	Size (în.)	4	Seismic PRA	_	integrity only		Non-Safety
	_		_		_			·
MOV_IVCIA (9A)	<u> </u>	18			_	1		
MOV IVC2A (10A)	\perp	18			$oldsymbol{ol}}}}}}}}}}}}}}}}}}}$			
MOV 1VC3B (11B)		18			_[
MOV 1VC4B (128)		18			T		7	
			1		7			
AIR-OP DAMPER CR-OAD-1 (5)	П		7		十		7	
AIR-OP DAMPER CR-OAD-3 (7)	П		7		+		-1	
AIR-OP DAINIPER CR-OAD-3 (7)								
AIR-OP DAMPER CR-OAD-3	\vdash		┪		+		-	

TABLE 2 -

,		TABLE 2	-					
	Г	Line	r	Included in		Press. bndry.	7	
VC SYSTEM COMPONENTS (cont.) - #	1	Size (in.)		Seismic PRA	П	Integrity only	┪	Non-Safety
	T	020 ()	┢				7	
AIR-OP DAMPER CRA-QAD-4	t	t	<u> </u>				7	
	┢	·	┢		-		†	
MOTOR-OP DAMPER CR-D-1 (2)			H		_		7	
MOTOR-OP DAMPER CR-D-4 (3)			┢				7	
MOTOR-OP DAMPER CR-D-5	Г		Г				1	
MOTOR-OP DAMPER CRA-D-1 (3)	Г						7	
MOTOR-OP DAMPER CRA-D-2 (4)	Τ	<u> </u>	Γ				1	
MOTOR-OP DAMPER CRA-D-5 (6)	Γ					X	T	
MOTOR-OP DAMPER CRA-D-11 (7)	Γ		_		٦	X	1	
MOTOR-OP DAMPER CRA-D-12 (8)	T-					X	T	
MOTOR-OP DAMPER CRA-D-13 (9)						X		
MOTOR-OP DAMPER CRA-D-14 (10)						X	T	
MOTOR-OP DAMPER CRA-D-16 (22)	Γ						T	
MOTOR-OP DAMPER CRA-D-17 (20)							1	
MOTOR-OP DAMPER CRA-D-19 (18)	Γ						7	
MOTOR-OP DAMPER CRA-D-21 (15)	Г						T	
MOTOR-OP DAMPER CRA-D-24 (30)							_	
MOTOR-OP DAMPER CRA-D-26 (28)							Ī	
MOTOR-OP DAMPER CRA-D-27 (25)							I	
MOTOR-OP DAMPER CRA-D-29 (23)								
MOTOR-OP DAMPER CRA-D-34 (33)								
MOTOR-OP DAMPER CRA-D-35 (36)							1	
MOTOR-OP DAMPER SGR-D-1 (2)								
MOTOR-OP DAMPER SGR-D-3 (4)							\perp	•
MOTOR-OP DAMPER SGR-D-5 (6)								
MOTOR-OP DAMPER SGR-D-7 (8)	L				┛		_	
	<u>L</u>	<u> </u>			_		1	
TRAIN A (B) CONTROL ROOM FILTER PACKAG			-14	(2)	_		4	
TRAIN A (B) CONTROL ROOM FILTER PACKAGE					_1		1	
TRAIN A (B) CONTROL ROOM AIR HANDLING					_		1	
TRAIN A (B) CONTROL ROOM AREA AIR HAND	<u>114</u>	4G UNIT CR	<u>'A-</u>	AHU-1 (2)	┙		1	
FAN UNIT BR-XF-1 (2)	Ŀ		<u> </u>		_		1	
SWITCHGEAR ROOM AIR HANDLING UNIT SGR	_		_		_		1	
SWITCHGEAR ROOM AIR HANDLING UNIT SGR	_		_		_		4	
SWITCHGEAR ROOM AIR HANDLING UNIT SGR					_		4	
SWITCHGEAR ROOM AIR HANDLING UNIT SGR	<u>}-A</u>	HU-2C (2D	<u>) </u>		_		1	
	L		L		_		1	
HEATER CRA-H-1	L	ļ <u>.</u>	<u> </u>	<u> </u>	_	. X	1	
HEATER CRA-H-2	L					X	\perp	
HEATER CRA-H-3			L			X	1	
HEATER CRA-H-4	L				_	X	┵	<u> </u>
HEATER CRA-H-5	L		L			X	1	
HEATER CRA-H-6 (8)	L		_		_	X	1	
HEATER CRA-H-7 (9)	L		L	•		Х		
HEATER CRA-H-11 (10)	L		_			X	_]
HEATER CRA-H-13 (12)	L	L	L			X		
HEATER CRA-H-15 (14)	L	<u> </u>				X		
# - only cursory review of these component	S Te	guired					T	

TABLE 2 -

		IABLE 2	-					
		Une		included in	_	Press. bndry.		
VC SYSTEM COMPONENTS (cont.) - #	Γ.	Size (in.)		Seismic PRA	_	Integrity only		Non-Safet
					_		Г	
HEATER CRA-H-19 (18)						X		
HEATER CRA-H-20 (17)	Γ					Х	Γ	
HEATER CRA-H-21 (16)						X	Γ	
HEATER CRA-H-23 (27)	Γ					X	Γ	
HEATER CRA-H-24 (28)						Х	Γ	
HEATER CRA-H-25 (29)	Г					X		
HEATER CRA-H-26 (30)						X		
	L							
	L							
	L	Line		Included in	_	Press. bndry.		
YC SYSTEM COMPONENTS - #	L	Size (in.)		Seismic PRA	_	integrity only	<u> </u>	Non-Safet
100000000000000000000000000000000000000				[_		L	
MOV 1YC2A (83B)	H	1.25	_		4		_	
MOV 1YC39B (38A)	_	8			_	X		
NAVVANUE NICEA (112)	H		_	 	_		_	
HWAY VALVE TYC54 (113) HWAY VALVE TYC76 (135)	H	5		├ <i></i>	_	X	-	
	H		_	 	4	X	-	
-WAY VALVE 1YC148 (204)	-	2.5	_	 	-		_	
-WAY VALVE 1YC162 (218)		2.5			-		_	
-WAY VALVE IYC176 (232)		2.5		<u> </u>	4			
-WAY VALVE 1YC190 (246)	-	2.5	_		-		_	
CONTROL ROOM AREA CHILLED WATER PUMP	\Box	DA D 1 (2)		 	-		-	
CONTROL ROOM AREA CHILLED WATER FOMI		KAT-1 (2)			-			
COMPRESSION TANK CRA-T-1 (2)	⊢		-		-			
COMPRESSION TAIN CRA-1-1 (2)	Н			 	٦		-	· · · · · · · · · · · · · · · · · · ·
	Н		_	,	\dashv		_	· · · · · · · · · · · · · · · · · · ·
	Н				٦		-	
	Н		_		-		-	
	-		_		٦		-	
	Н		_	 	٦			
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	Н	 [-		H	
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	-				-			
	\vdash				-		H	
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	Η,	 	_	 	-		-	
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		. ,						ı
	┢			 	-		-	

TABLE 3 -

MECHANICAL EQUIPMENT LIST	FC	OR MCG	į	IRE UNIT 2		PEEE WALK	(D	OWN
							Γ	
('B' train components are shown in parenthe	ses	. A detalle	d	walkdown of th	10:	se components	s is	not
necessary if the '8' train configuration is similar	or to	o the 'A' tro	in.)				
	L							
	L	Line		Included In		Press. bndry.		
CA SYSTEM COMPONENTS	上	Size (in.)		Seismic PRA	_	integrity only	L	Non-Safety
	Ļ		_		Ĺ.,		L	
AOV 2CA2DAB	┞	6					_	
AOV 2CA27A (32B)		4					<u> </u> _	
AOV 2CA36AB		4					L	
AOV 2CA48AB		4	_		_		L	
AOV 2CA52AB	┼-	4	_		<u> </u>		L	
AOV 2CA56A (44B)	╀	4	-		_		┞	
AOV 2CA60A (40B) AOV 2CA64AB	╁	4	_		_	A	-	
AOV ZCA04AB	╁	- 4	-				-	
MOV 2CA7AC	┢┈	8			_		-	
MOV 2CATIA (9B)	┢	8	-				-	
MOV 2CA15A (18B)	H	6					H	
MOV 2CA38B	+	4	_		_	l	\vdash	
MOV 2CA50B	t	4			_		Н	
MOV 2CA54AC	T	4			_		-	
MOV 2CA58A (46B)	\vdash	4			_	-	_	
MOV 2CA62A (42B)	t	4	\neg		_		_	
MOV 2CA66AC	1	4	٦		_		-	
MOV 2CA86A (1168)	Г	8			_			
MOV 2CA161C	Г	8						
TURBINE DRIVEN PUMP 2 (INCLUDING				X				
CONDENSATE EDUCTOR)				•				
TURBINE DRIVEN PUMP LUBE OIL HX						>		
MOTOR DRIVEN PUMP 2A (28)				X				
WZ SUMP PUMP A (B) FROM GROUNDWATER	DF	PAINAGE SU	M	PB (B)				
	L		_		_			<u> </u>
	L				_	•		
	1				٠.			
DIESEL GENERATOR AND SUPPORTING		Line	_	included in	_	Press. bndry.		
COMPONENTS	L	Size (in.)	4	Seismic PRA	_	integrity only	_	Non-Safety
D (C 0A (OD)		<u> </u>	4		_		_	
D/G 2A (2B)	ŀ		4	X	_		_	
ELEL OIL DAY TANK 2A (OD)	-		_		_		-	
FUEL OIL DAY TANK 2A (2B) FUEL OIL STORAGE TANK 2A (2B)	-	 	_	X			Н	
FUEL OIL BOOSTER PUMP 2A (2B)	+	 			-		-	
The second secon	-	 	4		_	X		
FUEL OIL FUEL TRANSFER FILTERS 2A1, 2A2 (2B1, 2B2)	-	 				X	\vdash	
FUEL OIL TRANSFER PUMP 2A (2B)	-	 	\dashv				\vdash	
FUEL OIL HANDFER PUIVIP ZA (ZD)	╀	 	_	_ 	_		$\vdash \vdash$	
	┢	 	-					
		<u> </u>	_				ليبا	

TABLE 3 -

·		IABLE 3	-					
DIESEL GENERATOR AND SUPPORTING	Τ	Line	Γ	Included In		Press. bndry.	Г	
COMPONENTS (cont.)	T	Size (In.)		Seismic PRA	_	integrity only	Г	Non-Safety
	Τ							
AIR-OPERATED REGULATING VALVE 2KD9	Τ	4	Г		_		_	
(2KD29)	Т				_			
	Г				_			
KD D/G COOLING WATER HX 2A (2B)			_				_	
KD INTERCOOLER PUMP 2A (2B)	Т		_				_	
KD JACKET WATER PUMP 2A (2B)	T		Г		_			
KD SURGE TANK 2A (2B)	Т		-		_			
D/G INTERCOOLER 2A (2B)			_				-	
	一		_		_		-	
MOV 2LD108 (113)	1	4	_			X		
LUBE OIL INTAKE STRAINER 2A (2B)	✝		_		_	X		
LUBE OIL FILTER 2A (2B)	Т				_	X	_	
LUBE OIL COOLER 2A (2B)	1				_	X	_	
	H		_		-		-	
VD D/G BLDG. VENTILATION FANS DSF-2A,	2C	(2B, 2D)			7		٦	
	Ť	(25,25)	_		┪		ᅱ	
SOLENOID VALVE 2VG61 (65)	┢	2	_		_		\neg	
SOLENOID VALVE 2VG62 (66)	┰	2	_		۲		-	
SOLENOID VALVE 2VG63 (67)	┢	2	-		_			
SOLENOID VALVE 2VG64 (68)	┼─	2	_		-		ᅥ	
VG STARTING AIR TANKS 2A1, 2A2 (2B1, 2B2)	┢		-	×	-		-	
VG INTAKE AIR AFTERCOOLERS AND DRYERS	24	1 242	_		٦		-	X
(281, 282)	Ĺ	1,2/2			┥		-	
VG CONTROL AIR VOLUME TANK 2A (2B)	-		-		┨			
VG AIR COMPRESSORS 2A1, 2A2 (2B1, 2B2)	-		-		-		┥	X
VG LINE PURIFIERS 2A1, 2A2 (2B1, 2B2)	-		-		┪		ᅥ	
VG CONTROL AIR FILTER 2A (2B)	\vdash		-		┪		-	·····
VO CONTROL FIRE FICIENZA (20)	1-	· · · · · · · · · · · · · · · · · · ·	-		-		-	
VN AIR INTAKE SILENCER 2A (2B)	-	-	٦		┪		-	Х
VN AIR EXHAUST SILENCER 2A (2B)	-		-		٦		ᅥ	<u>X</u>
THE PART CONTRACTOR OF	-		ᅱ		1		ᅦ	
WN D/G SUMP PUMPS 2A2, 2A3 (2B2, 2B3)	-		ᅥ		┪		-	X
VIV D CO (VIII TO VIII O EX 12, 23 10 (252, 250)	-		닉		-		-	
ZD VACUUM BLOWER PACKAGE 2A (2B)			┪		4	- 	ᅦ	X
THE TREE PROPERTY (25)	-		\dashv		٦		ᅱ	^
	-		ᅥ		1	·	-	
	-		\dashv		4		4	
	┢	Line	┪	included in	-	Press. bndry.	-	
FW SYSTEM COMPONENTS	├-	Size (in.)	\dashv	Seismic PRA	-	integrity only	-}	Non-Cafat
144 OLDICIAL COMM CIACIAIS	-	JILO (111.)		JOSHIL FRA	-{	a negrity Of ity	4	Non-Safety
MOV 2FW1A	\vdash	8	\dashv		4		-	
MOV 2FW27A	-	14	\dashv	 -	-		4	
MOV 2FW32B	├	8			-		-	
MOV 2FW32B	-	2	\dashv	 -	-		-	
MOV 2FW35A MOV 2FW49B	⊢		-		4		4	
	-	2	_		4		_	
REFUELING WATER STORAGE TANK (FWST)	├-		_	X	4		_	
	-	ļ			_		_	
L	ı	L l			-		ı	

TABLE 3 -

		TABLE 3 -			
		Line	Included in	Press. bndry.	
KC SYSTEM COMPONENTS		Ste (in.)	Seismic PRA	integrity only	Non-Safety
AOV 000574 (00D)				 	
AOV 2KC57A (82B)		12		1	
MOV 2KC1A (2B)		20		· 	 -
MOV 2KC3A (18B)	_	10		1	
MOV 2KC50A (53B)	-	20		-	
MOV 2KC51A (54B)		4		X	
MOV 2KC56A (81B)		16			
MOV 2KC230A (228B)		8			
KC HX 2A (2B)			X	 	
KC PUMPS 2A1, 2A2 (2B1, 2B2)	\neg		$\frac{1}{x}$	 	
UNIT 2 KC SURGE TANK			<u> </u>	1	
RHR PUMP MECH. SEAL HX 2A (2B)					
	_			 	
		Line	Included in	Press. bndry.	
NC SYSTEM COMPONENTS		Size (in.)	Seismic PRA	integrity only	Non-Safety
PZR PORV 2NC32B		3	×		
PZR PORV 2NC34A		3	X		
PZR PORV 2NC36B		3	X		
SAFETY REUEF VLV 2NC1	_ -	6	 	-	
SAFETY RELIEF VLV 2NC2	$-\!\!\!\!+\!\!\!\!\!-\!\!\!\!\!+$	6		ļ	
SAFETY RELIEF VLV 2NC3	-H	- 6	 		
MOV 2NC31B		3			
MOV 2NC33A		3			
MOV 2NC35B		3			
		Line	Included in	Diana Marda	
ND SYSTEM COMPONENTS	-H	Stze (in.)	Seismic PRA	Press. bndry. Integrity only	Non-Safety
AOV 2ND29 (14)		8		X #	<u> </u>
AOV 2ND34		8		X #	
MOV 2ND1B		14	 		+
MOV 2ND2AC		14		X #	
MOV 2ND19A (4B)		14			
MOV 2ND30A (158)		_ 8			
MOV 2ND32 (17)		2		X	
MOV 2ND33 (18)	_	8		X	
MOV 2ND58A		8		ļ	
# - required to function during cold sh	utdov	/n		 	
" Todasoc to totalion oring cold sit	UI LION	<u>''' </u>		<u> </u>	

TABLE 3 -

		IABLE 3 -	•	•			
		Line		Included in		Press. bndry.	
ND SYSTEM COMPONENTS (cont.)		Size (in.)		Seismic PRA		integrity only	Non-Safety
			Π			·	
MOV 2ND68A (67B)		2				#	
	Т						
ND PUMP 2A (2B)	Т			.X		*	
ND HX 2A (2B)	T			X		#	
			_				
			_				
	\top		_				
	\top	Line	_	included in		Press. bndry.	
NI SYSTEM COMPONENTS		Size (in.)		Seismic PRA		integrity only	Non-Safety
			_		_		
AOV 2NI50	${\mathbb T}_{\!\scriptscriptstyle -}$	1				Х	
AOV 2NI56	Т	1				Х	
AOV 2NI57	Т.	0.75				X	
AOV 2NI58	\top	0.75				X	
AOV 2Ni61	T	1				X	
AOV 2NI67	\top	1				X	
AOV 2NI68	\top	0.75	-			X	
AOV 2NI69		0.75				X	
AOV 2NI72	_	1				Х	
AOV 2NI78		1	_			X	<u> </u>
AOV 2NI79.	1	0.75				X	
AOV 2NI80	_	0.75				X	
AOV 2NI84	丁	1	ᅦ		ᅦ	X	·
AOV 2NI90	1	1	٦		┪	X	
AOV 2NI91	1	0.75	٦		-	X	
AOV 2NI92		0.75	٦			X	
AOV 2NI163		0.75	╛			X	
AOV 2NI174 (179)	_	0.75	ᅱ			x	·
	_		\neg		7	•	 -
MOV 2NI9A (10B)	_	4	┪		7	#	
MOV 2NI54A	1	10	┪		7	X #	
MOV 2NI65B		10	7		7	X #	
MOV 2NI76A		10	٦			#	
MOV 2NI88B		10	\exists	·	_	#	
MOV 2NI100B		8	ᅦ		_	X	
MOV 2NI103A (1358)		-6	╗		٦	X	
MOV 2NI115B (144B)	:	1.5	┪		7	X	
MOV 2NI118A (150B)		4	ㅓ		┪	X	
MOV 2NI121A (152B)	+	4	╛		┪	$\frac{x}{x}$	-
MOV 2NI136B	+	6	ᅥ		-{		
MOV 2N1147A	+	2	\dashv		\dashv		
MOV 2N1162A	+-	4	ᅱ		-	X	-
MOV 2N173A (178B)	+-	8	\dashv		-	X	 -
MOV 2N183B	+		\dashv	······································	4	,	-
	-	12	_			X	-
MOV 2NI185A (184B)		18	4		_		
MOV 2NI332A	+-	6	_		4		·
MOV 2NI333B		6	_				
 required to function during cold shut 	dov	∕n					

TABLE 3 -

		IABLE 3 -				•		
		Line		Included in	Т	Press. bndry.		
NI SYSTEM COMPONENTS (cont.)	Γ	Size (in.)		Seismic PRA	T	integrity only		Non-Safety
•	Г				7		_	
MOV 2NI334B	Γ	6			1	Х		
• •	Г				7			
2NI430A (NITROGEN BACKUP TO PZR PORVS)	Г	0.75		X	1		_	
2NI431B (NITROGEN BACKUP TO PZR PORVs)	Г	0.75		Х	7			
	Γ		-		十			
NI PUMP 2A (2B)	Г			X	\top			
(not needed for inventory control for 1° SBI	io	CA)			7			
COLD LEG ACCUMULATORS	Γ			X	7			
(not needed for 1'SBLOCA)					十			
	T				十			
	Г				1			
	Г	•			十			
	 	Line	_	Included in	+	Press. bndry.	_	
NS SYSTEM COMPONENTS	1	Size (in.)	╗	Seismic PRA		Integrity only		Non-Safety
	Г				-			
MOV 2NS43A (38B)	1	8	_		十		_	
	T				十		_	_
SPRAY NOZZLES DOWNSTREAM OF 2NS47 (42)	<u> </u>		٦		-			
	ĺ				十			
	T				- -		┪	
	1	 -	_		十		-	
	Г	Line	_	included in	-h	Press. bndry.		
NV SYSTEM COMPONENTS	┢	Size (in.)	7	Seismic PRA		ntegrity only	7	Non-Safety
	1	333 (113)	7	COMPAGE TO THE T		1	-	
AOV 2NV238	┪	3	٦		╁	×	\dashv	
AOV 2NV241	┢	3	7		+	×	-	
	\vdash	- -	7		十		٦	
MOV 2NV94AC	一	4	┪		十		7	
MOV 2NV95B	H	4	٦		╌		7	
MOV 2NV141A	-	4	┪		-	X	7	
MOV 2NV142B	-	4	7		- -	X	-	
MOV 2NV150B	-	2	┪		┰	×	┪	
MOV 2NV151A	\vdash	2	ᅦ		╁	x	ᅦ	
MOV 2NV221A	H	8	┪		╌		┪	
MOV 2NV222B	\vdash	8	7		┰		ᅥ	
MOV 2NV244A	\vdash	3	7		┰		-	
MOV 2NV245B	一	3	┪		+		-{	
11107 2117 2100	-	 	-		╁		┪	
CENTRIFUGAL CHARGING PUMP 2A (2B)	\vdash	 -	-	X	╁		-{	
SEAL WATER HX 2	-	 -	-		┰	×	-	
SEAL WATER INJECTION FILTER 2A (28)	┢	 -	-		- -	×	[
SEAL WATER RETURN FILTER 2	-	 	-		十	×	-	
VOLUME CONTROL TANK 2	┝	 	4		+		-	
(not needed for Inventory control for 1" SBI	<u> </u>	<u> </u>	4	X	- -	X	4	
REGENERATIVE HEAT EXCHANGER	2		{				-{	
	ب		4	Х	-}-	X	-	
(not needed for Inventory control for 1° SB	<u> </u>		4		- -		_	
	 -		4		_ _	\	_	
<u> </u>	L	<u> </u>						

TABLE 3 -

•		TABLE 3	-					
	T	Line		included in		Press. bndry.		1
. RN SYSTEM COMPONENTS	T	Size (In.)		Seismic PRA		integrity only		Non-Safety
	T							
AOV 2RN21A (258)		6						
AOV 2RN22A (26B)	T	6					Г	,
AOV 2RN68A (161B)	T	1.5						
AOV 2RN89A (190B)	Т	20	1				Г	
AOV 2RN103A (2048)	T	3?	_				Г	
AOV 2RN112A (213B)	\top	2	_					
AOV 2RN114A (2158)	\top	2				X	_	
AOV 2RN117A (218B)	1	2					_	
AOV 2RN126A (227B)	1	2				Х	_	
AOV 2RN130A (231B)	T	2		·			_	
AOV 2RN140A (240B)	1	4	_			Х		
AOV 2RN166A (170B)	†	2			-		_	
AOV 2RN252B	1	6	_			Х		
AOV 2RN277B .	†	6	_		_	X		
	T	 	_		٦	-,		
MOV 2RNI	+	42	_	 	-	х	_	
MOV 2RN16A (18B)	+	36	_		-	x		
MOV 2RN40A	十	10		 	_	X		
MOV 2RN418 (43A)	+	. 10	_		_	· · · · · · · · · · · · · · · · · · ·		
MOV 2RN42A	十	10	_		_			
MOV 2RN63B	†	10	_		_	Х	_	·
MOV 2RN64A	1	10	_		7	X	_	
MOV 2RN69A (162B)	1	8	_		7			
MOV 2RN70A (171B)	+-	8	-		-		_	
MOV 2RN73A (174B)	†	8	_		-	×		
MOV 2RN86A (187B)	╁╴	20			٦			
MOV 2RN134A (235B)	十	18	_		ᅦ	х		
MOV 2RN137A (238B)	╁╴	18			┪	x		
MOV 2RN253A	十	6	-		┪	х	\neg	
MOV 2RN276A	1	6	7		┪	X	-	
MOV 2RN279B	+-	6			٦	X	-	
MOV 2RN296A (297B)	+-	36	-		ᅥ	X	_	
MOV 2RN299A	1-	6	_		-1	X	_	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	+-	 	_		-		_	· · · · · · · · · · · · · · · · · · ·
RN PUMP 2A (2B)	+		_	Х	ᅦ			
RN STRAINER 2A (2B)	+		_	 	-			
STANDBY NUCLEAR SERVICE WATER POND	+	 		X	-		-	
ON HEADT HAVEL IN OPHINGS AND LOND	1		_					
	$oldsymbol{\perp}$		_				_	
SA, SM, SV COMPONENTS	F	Line Size (in.)	_	Included in Seismic PRA	4	Press. bndry. Integrity only		Non-Safet
	上	34G (111.)		GEISHAU PRA		aneginy Only	_	Non-Safety
AOV 2\$A49AB (48AB)	+	6			-			
STEAM STOP VALVE TO TOP - 2SA3	士	3					_	
STEAM CONTROL VALVE TO IDP - 2SA4	L	3	_		اً			
MSIV 2SM1AB		- 34	_					

TABLE 3 -

		IABLE 3	•				
	Т	Une	1	Included in		Press. bndry.	
SA, SM, SV COMPONENTS (cont.)	T	Ske (in.)		Selsmic PRA		Integrity only	Non-Safety
	┪		Γ		_		
MSIV 2SM3AB .	\top	34	Γ				
MSIV 2SM5AB	+	34					<u> </u>
MSIV 2SM7AB	十	34					
	1		1				-
MSI BYPASS VLV 2SM9AB	+	3	Г				
MSI BYPASS VLV 2SM10AB	\top	3	<u> </u>				
MSI BYPASS VLV 2SM11AB	1	3	Г		_		
MSI BYPASS VLV 2SM12AB	\top	3	<u> </u>		_		
	†		\vdash		_		
AOV 2SM78	+	2			-	Х	
AOV 2SM83	1	2	Г		_		
AOV 2SM84	十	2			_	X	
AOV 2SM89	1	2	Н		-		
AOV 2SM90	十	2	┢		\dashv	X	
AOV 2SM95	+	2	М				
AOV 2SM96	十	2	Н		-	X	
AOV 2SM101	+	2			_		
	+				-		
SG PORV 2SV1AB	+	6		х	٦	x	
SG PORV 2SV7ABC	十	6		X	7	X	
SG PORV 2SV13AB	十	6	٠	X		×	
SG PORV 2SV19AB	+	6		X	7	x	
	十		-		ᅦ		
SG SRV 2SV2	+	6			┪	Х.	
SG SRV 2SV3	+	6	-		-	X	<u> </u>
SG SRV 2SV4	+	6	П		1	×	
SG SRV 2SV5	十	6	_		7	x	
SG SRV 2SV6	+	6	-		ᅥ	X	
SG SRV 2SV8	十	6			٦	x	
SG SRV 2SV9	十	6			7	- X	-
SG SRV 2SV10	╁	6			7	X	
SG SRV 2SV11	+	6	_			×	
SG SRV 2SV12	+-	6	Н		┪	×	
SG SRV 2SV14	+-	6			7	<u> </u>	
SG SRV 2SV15	十	6			┪	x	
SG SRV 2SV16	+	6			7	X	<u> </u>
SG SRV 2SV17	1	6	-		7	×	
SG SRV 2SV18	1	6	-		┪	x	
SG SRV 25V20	+	6	-		\dashv	x	
SG SRV 2SV21	+-	6			+	- x	
SG SRV 25V22	+		-	····	-{		
SG SRV 25V22 SG SRV 25V23	+	6		···	4	X	<u> </u>
SG SRV 25V23 SG SRV 25V24		6			-	X	 -
30 3KV 23V24	+-	6	_		_}	X	-
MOV 257/25	+	, ,	-		4		
MOV 2SV25	+	6	_		4	X	ļ
MOV 2SV26	-	6	_		4	X	ļ <u>.</u>
MOV 2SV27	+-	6	\dashv		_	Χ .	<u> </u>
MOV 2SV28)	6			_	X	L

TABLE 4 -

ELECTRICAL EQUIPMENT LIST F	OF	MCGU	IR	E UNIT	1	PE	EE WALKDO	NWC
	T		I					
ADEA TENANSANION CARRIERO		<u> </u>	1_	 		4	Included in	
AREA TERMINATION CABINETS	+		╀			+	Selsmic PRA	Non-Safet
	工		L					
	+		╀			}		
	土						Included in	
AUXILIARY SHUTDOWN PANEL						\perp	Seismic PRA	Non-Safet
	+		-			+	Х	
	丰			·		\Box		
	+-	 				╂┪	Included in	
SUPPORT FOR CA SYSTEM	T						Seismic PRA	Non-Safet
1160V AC SWITCHGEAR 1ETA (1ETB)	+-	 	-			H	х	
SOOV AC MCC 1EMXA (1EMXB) (1EMXB-2	7	 				H	x	
500V AC MCC 1EMXA-4	十	 	f			\Box	X	
500V AC MCC 1EMXA-5	1		Ħ			+1	X	_
125V DC DISTRIBUTION CENTER 1EVDA (1EV	/OB)		╁			+	x	
125V DC PANELBOARD 1EVDA (1EVDB)	Ť		 				X	
120V AC PANELBOARD 1EVKA (1EVKB) & 1	MAN	UAL TRAN	ISFI	R SWITC	Н	+-1	X	-
OCAL MOTOR-DRIVEN PUMP CONTROL PA	ANE	L			···		X	
OCAL TURBINE-DRIVEN PUMP CONTROL P.			1			1	X	
SFAS TRAIN A (B) 48V DC POWER SUPPLIE		ř				\top		
BATTERY EVCA (EVCB)	╁	 				+		
BATTERY CHARGER EVCA (EVCB)	十		Н			11		
OC CIRCUIT BREAKER FOR MOPIA (MOPIE) AI	JOSTARI				11		
NVERTER LEVIA (1EVIB)	~~	1	Н			H		
TO PUMP RELAY HE	一		Н			+		
MFW PUMP RELAY BB(A) (BB(B))	- -		\vdash			- -		
MFW PUMP RELAY R/TT(FPTCA) (R/TT(FPTCB	<u> </u>		Н			+		+
MFW PUMP RELAY R/TF-1 (FPTCA) (R/TF-1 (F		RIX	\vdash			╂┪		
RELAY R25C(A) (R25C(B))	Ť	<u> </u>	-			+		-
RELAY K609A (K609B)	-	 	\vdash			+		-
RELAY LRAG (LRBG)	十	 	1	<u> </u>		+		
LOAD SHED RELAY LSA1 (LSB1)	_	<u> </u>				+		
TEST RELAY TSA2 (TSB2)	+-		1			1		
ESFAS SLAVE RELAY K633A (K633B)	╅	 	\vdash	<u> </u>		+		-
ESFAS SLAVE RELAY K634A (K634B)	╁		\vdash	-		+-1		
ESFAS MASTER RELAY K516A (K516B)	┰	 	\vdash			+		_
ESFAS INPUT RELAY K113A (K113B)	╈		┢			╁┤		-
ESFAS INPUT RELAY K114A (K114B)	+	 	\vdash			$\dashv\dashv$		
ESFAS INPUT RELAY K114A (K114B)	+-	 	-	 -		+		+
	+	 	+-	ļ		+		
ECEAC INIDIST DELAY VIENA AVIENDA			╄	<u> </u>		+-		
ESFAS INPUT RELAY K150A (K150B)	ı							
ESFAS INPUT RELAY K230A (K2308)	-		╀	 		╀╌		
	$\frac{1}{1}$		L					

TABLE 4 -

	_	IAGLE 4					·,
	L				丄	Included in	
SUPPORT FOR CA SYSTEM (cont.)	_					Seismic PRA	Non-Safet
		<u> </u>					T
SFAS INPUT RELAY K331A (K331B)	Γ				T		
ESFAS INPUT RELAY K332A (K332B)	Γ				$\neg \vdash$		
ESFAS INPUT RELAY K333A (K333B)	Г				1		
ESFAS INPUT RELAY K334A (K334B)	厂				_		
ESFAS INPUT RELAY K407A (K407B)	1-		Н		_		
ESFAS INPUT RELAY K408A (K408B)	┪				-		
ESFAS INPUT RELAY K409A (K409B)	 						+
ESFAS INPUT RELAY K410A (K410B)	一		Н		╌├╌	 	
SFAS LOGIC MODULE A317A (A317B)	┢		Н		- -	 	
D/G LOAD SEQUENCER (LOAD ACTUATE) REL	$\frac{1}{\sqrt{2}}$	214(049)	닛	IA (DDB))	+	 	
DIG LOAD SEQUENCER RELAY AS (B3)	읃	237(1070)	<u>\</u>	Alkoon	-}-	}	-}
SG A LO-LO WATER LEVEL CHANNEL 1 BIST.	L AD	E	Н			}	
			닞		+-	 	·
SG A LO-LO WATER LEVEL CHANNEL 1 LEV			FIK		- -	<u> </u>	
SG A LO-LO WATER LEVEL CHANNEL 2 BIST.					- -		
SG A LO-LO WATER LEVEL CHANNEL 2 LEV			ᄣ		-		
SG A LO-LO WATER LEVEL CHANNEL 3 BIST.			Ш			 	<u> </u>
SG A LO-LO WATER LEVEL CHANNEL 3 LEV			ER			<u> </u>	<u> </u>
SG A LO-LO WATER LEVEL CHANNEL 4 BIST.	_						<u> </u>
SG A LO-LO WATER LEVEL CHANNEL 4 LEVI			ER				ļ
SG B LO-LO WATER LEVEL CHANNEL 1 BIST/							
SG B LO-LO WATER LEVEL CHANNEL I LEVE			ER				
SG B LO-LO WATER LEVEL CHANNEL 2 BIST/							
SG B LO-LO WATER LEVEL CHANNEL 2 LEVE	L	TRANSMITT	ER				
SG B LO-LO WATER LEVEL CHANNEL 3 BIST/							
SG B LO-LO WATER LEVEL CHANNEL 3 LEVE	L	TRANSMITT	ER				
SG B LO-LO WATER LEVEL CHANNEL 4 BISTA	٩BI	E					
SG B LO-LO WATER LEVEL CHANNEL 4 LEVE	L	RANSMITT	ER		1		1
SG C LO-LO WATER LEVEL CHANNEL 1 BIST	AB	E					
G C LO-LO WATER LEVEL CHANNEL 1 LEV	EL	TRANSMIT	ER				
SG C LO-LO WATER LEVEL CHANNEL 2 BIST					1		
SG C LO-LO WATER LEVEL CHANNEL 2 LEV	_		ER		_		
SG C LO-LO WATER LEVEL CHANNEL 3 BIST.			m		_	-	
SG C LO-LO WATER LEVEL CHANNEL 3 LEV			FR		+		
SG C LO-LO WATER LEVEL CHANNEL 4 BIST					+		
SG C LO-LO WATER LEVEL CHANNEL 4 LEV	_		FD		+-		
SG D LO-LO WATER LEVEL CHANNEL 1 BIST.	_				┪		
SG D LO-LO WATER LEVEL CHANNEL 1 LEVI	_		EO.		╬		
			EK		┰	 	
SG D LO-LO WATER LEVEL CHANNEL 2 BIST			ييا		-	-	
SG D LO-LO WATER LEVEL CHANNEL 2 LEV			EK				
SG D LO-LO WATER LEVEL CHANNEL 3 BIST			ليا			L	
SG D LO-LO WATER LEVEL CHANNEL 3 LEV			ER		_ _		<u> </u>
SG D LO-LO WATER LEVEL CHANNEL 4 BIST			Ш				
SG D LO-LO WATER LEVEL CHANNEL 4 LEV	_						
INSTR. LOOP CONTAINING ICASV/MV0200,	SV	0201, & SV	/02	02			
INSTR. LOOP CONTAINING 1CASV/MV0270 (032	20) & SVO	271	(0321)	T		1
INSTR. LOOP CONTAINING ICALL/P/SV/MLQ			M		\top		1
HARINE FOOL COLLINIAL ICHTELL 124 MAIER						·	
INSTR. LOOP CONTAINING ICALL/P/SV/MLQ		(0440)			7-		1

TABLE 4 -

		INDLE					
	1]	\neg			Included in	
SUPPORT FOR CA SYSTEM (cont.)	Т					Seismic PRA	Non-Safety
	1	T	\neg				
INSTR. LOOP CONTAINING ICALL/P/SV/MLO	640	(0360)	_				
INSTR. LOOP CONTAINING ICAFE/PS/FT/P 50				01 (5011)	. & PS5	002 (5012)	
INSTR. LOOP CONTAINING ICAPS/PT/P 5020			Ť	, , , , , , , , , , , , , , , , , , ,		1	
INSTR. LOOP CONTAINING ICAFE/PS/FT/P 50			PSS	042 & P	\$5044	 	
INSTR. LOOP CONTAINING ICAPS/PT/PG/P 5			- T	1		 	
INSTR. LOOP CONTAINING ICAPS/PT/P 5070			_				
INSTR. LOOP CONTAINING ICAFE/FT/P 5090			1509	(5111)			
INSTR. LOOP CONTAINING ICAFE/FT/P 5100							
INSTR. LOOP CONTAINING 1CAPS/PT/P 5160		T	T			 	
INSTR. LOOP CONTAINING ICPLT/P 5490	T	T	_				
INSTR. LOOP CONTAINING ICFLT/P 5500	T						
INSTR. LOOP CONTAINING ICFLT/P 5510	十	1	一				
INSTR. LOOP CONTAINING ICFLT/P 5520	1-	 	_				-
INSTR. LOOP CONTAINING ICFLT/P 5530	十		_				
INSTR. LOOP CONTAINING ICFLT/P 5540	十	1	_				
INSTR. LOOP CONTAINING 1CFLT/P 5550	t	 					
INSTR. LOOP CONTAINING ICFLT/P 5560	1	 	_				
INSTR. LOOP CONTAINING ICFLT/P 5570	1		_				
INSTR. LOOP CONTAINING ICFLT/P 5580	1	 				-	
INSTR. LOOP CONTAINING ICFLT/P 5590	Т						
INSTR. LOOP CONTAINING ICFLT/P 5600	1						
INSTR. LOOP CONTAINING ICFLT/P 6000	Τ						
INSTR. LOOP CONTAINING 1CFLT/P 6010	Τ		\neg				
INSTR. LOOP CONTAINING 1CFLT/P 6020	Τ						
INSTR. LOOP CONTAINING ICFLT/P 6030	Т						
	Τ						
	Τ						
	Π						
	Τ					Included in	
SUPPORT FOR DIESEL GENERATORS	Τ					Seismic PRA	Non-Safety
	1	,					
4160V AC SWITCHGEAR 1ETA (1ETB)	Т					X	1
600V AC LOAD CENTER IELXA (IELXB)	Т					Х	1
600V AC LOAD CENTER TELXC (TELXD)	1					X	
600V AC LOAD CENTER TELXE (TELXF)	\top					X	
600V AC MCC IEMXA (IEMXB)	Т					X	
600V AC MCC 1EMXE	Т		7			X	
120V AC PANELBOARD IDG1A (IDG1B)	Т					· X	
125V DC PANELBOARD 1EVDA (1EVDD)	Т		$\neg \vdash$			Х	
125V DC BATTERY / RACK	Т	1				X	
INVERTER	T		_	~ ~~~		X	
D/G CONTROL PANELS	T	1	_			X	
BATTERY 1EDGA (1EDGB) AND CHARGERS	1		1			X	<u> </u>
BATTERY LEDGA (LEDGB) INPUT & OUTPUT	BR	EAKERS	一				
600 / 120V AC TRANSFORMER TO PANELBOA			ODG	1B)			<u> </u>
BREAKER DG1A-2 (DG1B-2)	Ť	1	T				
AUTO RESET RELAY ED(TRA3) (ED(TRB3))	†	 		 			
BLACKOUT RELAY DC(8OA) (DC(8OB))	t	 	-		-+	 	
Position real politory (politop)	ــــــــــــــــــــــــــــــــــــــ	<u> </u>		L			

TABLE 4 -

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	Γ		T		T	Included in		
SUPPORT FOR DIESEL GENERATORS (cont.)	1		1		_	Seismic PRA	Т	Non-Safety
	†		T	 	+-		┢	
BLACKOUT LOGIC RELAY DA(LRA2) (DA(LRB2	Υ.	 	十		╁		 -	
DEFEAT TEST RELAY FB(DTSA) (FB(DTSB))	"	 	╁╴	 	+		-	
D/G START RELAY 2TRA(A) (ZTRA(B))	╀	 	╁╌				_	
	╀	 	╄	ļ			_	
D/G START RELAY 2TRA1(A) (2TRA1(B))	⇤		┸				_	
D/G START RELAY 2TRB(A) (2TRB(B))	Ļ.		L	<u> </u>	4_			
D/G START RELAY 2TRC(A) (2TRC(B))	<u></u>	<u> </u>	上		1_		_	
DIESEL STARTING AIR RELAY RVG1(A) (RVG			上					
DIESEL STARTING AIR RELAY RVG2(A) (RVG	2(B))	1		-			
DIESEL STARTING AIR RELAY RVG3(A) (RVG	3(B))	T		1			
D/G AUTOSTART RELAY DASR(A) (DASR(B))	Т		T		\top		_	
LOAD SHED RELAY AB(LSA1) (AB(LSB1))	1	 	†		+		_	
LOAD SHED RELAY AA(LSA2) (AA(LSB2))	1		✝		+		-	
LOAD SHED TIMER RELAY GC(LSAT) (GC(LS	<u>kn</u>	'	†		╫		_	
LOGIC TIMER RELAY FD(LT1A) (FD(LT1B))	T'	í	┿	 	╁			
LOGIC TIMER RELAY FD(LT2A) (FD(LT2B))	╀╌	 	┿	}	+-		-	
	╀╌		╫		-			
RELAY AC(12728X)	╀	 	╁╾	ļ	╬-			
RELAY AE(127XBX)	ļ	 	╀-	 				
RELAY 3CR(A) (3CR(B))	Ļ	<u> </u>	1_		4_		_	
RELAY ART(A) (ART(B))	L	ļ	ļ.,		丄		_	
RELAY DG 1FRA (DG 1FRB)	L	ļ	L		丄		_	
RELAY ESX(A) (ESX(B))	L	<u> </u>	L	<u> </u>	L			
RELAY 2TRA(A) (2TRA(B))	L		L	<u> </u>				
RELAY FC(TRA1) (FC(TRB1))	L							
RELAY HRA(AA) (HRB(BB))								
RELAY RTD(A) (RTD(B)) .	Γ		Γ		\Box			
RELAY STATX(A) (STATX(B))	Г		П					
RELAY SIA2X(A) (SIA2X(B))	Γ		Γ		T			
RELAY SIA4X(A) (SIA4X(B))	Π		T		T		j	
RELAY TSA3 (TSB3)	Τ		1		1		_	
RESET RELAY EB(RRA) (EB(RRB))	1		\vdash		╁		-	
RESTART RELAY FA(RGA) (FA(RGB))	┢		┼~		+-		\dashv	
UNDERVOLTAGE RELAY 4CA(A) (4CA(B))	⊢		╁		+-	·	-	
UNDERVOLTAGE RELAY 4DA(A) (4DA(B))	╁		╆	ļ	+-		-	
UNDERVOLTAGE RELAY AC(127ZAX) (AC(12		1	╄╌				-	
	_		┾				_	
UNDERVOLTAGE RELAY AD(127YAX) (AD(12			╄		+		_	
UNDERVOLTAGE RELAY AE(127XAX) (AE(12	<u>/XŁ</u>	(X))	╄		\perp		_	~
RESET SWITCH 4CC(A) (4CC(B))	L		Ļ		4_		_	
RESET SWITCH EG 135	L		L				_	
SPEED SWITCH STAT (STBT)	L			<u> </u>				
SPEED SWITCH S1A2 (S1B2)			T	l	T			
INSTR. LOOP CONTAINING 1FDLS5040 & LS504	11	(5050 & 5	05	0)	\top			
INSTR. LOOP CONTAINING 1LDPG/PS5120 & PS					1/5	132/5133)	_	
INSTR. LOOP CONTAINING 1LDPT/PG5360 (53)			Ť	1	Ť		ᅱ	
INSTR. LOOP CONTAINING 1VGPG/PS5040 & P			740	& 5070)	+			
INSTR. LOOP CONTAINING 1VGPG/PS5080 (50			$\frac{\pi}{1}$	1 30/0)	+			
INSTR. LOOP CONTAINING TVGPG/PSS080 (SL INSTR. LOOP CONTAINING TVGPG/PSS120 & F			140	0.5140	4-		-	
					+		_	
INSTR. LOOP CONTAINING IVGPG/PS5130 & P	<u>9/</u>	rs5132 (5	100	& 3 152)	-		_	
	1_	<u> </u>	<u></u>	<u> </u>		<u> </u>	ا	<u> </u>

TABLE 4 -

		TOLL .	-				
	floor				Γ	Included in	
SUPPORT FOR FW SYSTEM	I		7		Γ	Seismic PRA	Non-Safety
	T		\top	1	Τ		
NSTR. LOOP CONTAINING 1FWLT/P 5000	T	1	1	1	T	1	1
NSTR. LOOP CONTAINING 1FWLT/P 5010	十	 	_	1	T	1	
NSTR. LOOP CONTAINING 1FWLT/P 5020	十	 	\neg	 	十	†	-
	十	 	+	 	H	1	-
	┰	 		 	t	 	
	+	 		 	┢	 	
	╁	-		 	┝	Included In	
SUPPORT FOR KC SYSTEM	十	 		 	╆	Seismic PRA	Non-Safety
SOFT ON TON NO STOLEN	┿	 			⊢	JOBSITIC FRA	11401730161
1160V AC SWITCHGEAR 1ETA (1ETB)	╁	 	+	 	┝	 	
500V AC MCC 1EMXA (1EMXB)	╫	 			┝	×	
	+-	├	+	 	⊢	X	
25V DC PANELBOARD 1EVDA (1EVDD)	늤	(000(4)	~		⊬	 ^ 	
D/G ACCELRATED SEQUENCE RELAY 2DB(AA					\vdash	 	
DIG AUTO RESET AUXILIARY RELAY COUTRAS			(3X))	<u> </u>	-	 	
O/G LOAD ACTUATE RELAY 2HA(RA6) (2H		(00))			 -	 	
D/G LOAD SEQUENCER RELAY LSA2 (LSB2)	4	 		ļ	 	 	
D/G LOAD SEQUENCER RELAY RAG (RBG)	1_	<u></u>			_		
D/G LOADING TRANSIENT ADVANCE TIMER F					Ļ		
D/G LOADING TRANSIENT ADVANCE TIMER F					L	 	<u> </u>
D/G LOADING TRANSIENT ADVANCE TIMER F					L		
D/G LOADING TRANSIENT ADVANCE TIMER F			<u> </u>	(2DD(ATB4))	L		
D/G SEQUENCE TIMER RELAY GA(ST4A) (G.					L		
D/G SEQUENCE TIMER RELAY GB(ST2A) (GE					L		
D/G SEQUENCE TIMER RELAY HB(ST&A) (HB					L		
D/G SEQUENCE TIMER RELAY HC(ST5A) (HC	<u> (ST</u>	58))					
D/G TEST RELAY 2FB(TSA4) (2FB(TSB4))	L						
SFAS SLAVE RELAY K610A (K610B)	$oxed{\mathbb{L}}$						
EST RELAY TSA1 (TSB1)			T		Γ		
NSTR. LOOP CONTAINING 1KCPT/P 5490 (550	Ø)				Г		
NSTR. LOOP CONTAINING 1KCFE/FT/P 5530 (554	0)	$\neg \neg$		Γ		
NSTR. LOOP CONTAINING 1KCFE/FT/FS/SV/P 5					_		
	T	1	-		┢		
	十	 	-		-	 -	
·	十	 	- -		一	 	
	十	 	-		┝	Included in	
MAIN CONTROL BOARDS	十	 			┢	Seismic PRA	Non-Safety
IVIAIIA COMMON DONKOS	+	 	-+-		-	X	INDIFACION
	+-	 	-+-		-	 ^ 	+
	╀	 			_		
	+	 	_ _		<u> </u>	 	
	+	 			Ŀ	 	
	-	ļ	_ _		L	Included in	1
SUPPORT FOR NC SYSTEM	丄	<u> </u>			L	Seismic PRA	Non-Safety
	1				L		
1160V AC SWITCHGEAR 1ETA (1ETB)	L					X	
SOOV AC LOAD CENTER IELXA (IELXB)						X	
SOOV AC LOAD CENTER TELXC (TELXD)	Т		\top		Γ	X	1
SOOV AC MCC TEMXC (TEMXD)	1		1			X	1
25V DC PANELBOARD IEVDA (IEVDD)	+-	 	-		_	X	

TABLE 4 -

	_	IMBLE 4					
						Included in	
SUPPORT FOR NC SYSTEM (cont.)	Τ		Γ		Т	Seismic PRA	Non-Safety
	Τ				1		
ACCELERATED SEQUENCE RELAY 2CB(AA1)	(2	CB(AB1))	1		⇈		
ESFAS SLAVE RELAY KOOBA (KOOBB)	Ť	1	╁		十		
ESG AUXILIARY RELAY BD(ESGAX1) (BD(ESG	RY	11)	1-		十		
LOAD SHED RELAY AB(LSA1) (AB(LSB1))	T	i "	╁╌		+-	<u> </u>	
MAXIMUM SEQUENCE TIMER RELAY BE(LT3A)	/E	EU LSDI)	┢		十		_
RELAY 2AB(LRA4) (2AB(LRB4))	┰ <u>``</u>	Lition	⊢		╁	 	
RELAY DC(BOA) (DC(BOB))	╁	 	┢		╀		
	╁╴	<u> </u>	┢		╀	<u> </u>	
RELAY DA(LRA2) (DA(LRB2))	╀		⊢		┨		
RELAY FC(TRA1) (FC(TRB1))	<u> </u>		├-		╁	<u> </u>	
SEQUENCER LOAD RELAY 2CA(RA1) (2CA(RB		ļ	<u> </u>		╀		
SEQUENCER LOAD RELAY 2DA(RA2) (2DA(RB		<u> </u>	├-		╀		
SEQUENCER TIMER RELAY JA(ST1A) (JA(ST1E)))	<u> </u>	L		╄	ļ	
TEST RELAY 2FB(TSA4) (2FB(TSB4))	┡	<u> </u>	L		╀	<u> </u>	_
TEST RELAY 2GB(TSA5) (2GB(TSB5))	L	<u> </u>	┖		┺		
UNDERVOLTAGE RELAY CB(127AX) (CB(127I			L		_		
INSTR. LOOP CONTAINING INCSV0320 & SV0			L		1		
INSTR. LOOP CONTAINING INCSV0340 & SV0	34						
INSTR. LOOP CONTAINING INCSV0360 & SV0	36				L		
			\Box				
	Π				Т		
	Т		Г		Τ		
	1				Τ	Included in	
SUPPORT FOR NO SYSTEM	Т				Τ	Seismic PRA	Non-Safety
	1		Г	*···	✝		
4160V AC SWITCHGEAR 1ETA (1ETB)	Т		Т		T	X	
600V AC MCC IEMXA (IEMXB-1)	丅				1	X	
125V DC DISTRIBUTION CENTER 1EVDA (1EVD	Ö				T	X	
D/G LOAD ACTUATE RELAY 2FA(RA4) (2FA(1		
RELAY DGTSA6 (DGTSB6)	Ť	"	┢		十		
RELAY LSA1 (LSB1)	┢	 -	-		┼~		
INSTR. LOOP CONTAINING INDRD/P 5000 (5	120	N & INDE		D ICDEDED (EC	<u> </u>	 -	-
INSTR. LOOP CONTAINING INDEE/FS5040 (5)			אַ	- /CR3000 (30	10)		
INSTR. LOOP CONTAINING INDPT/P 5090 (50			\vdash		╁		
INSTR. LOOP CONTAINING INDFE/FT5250 (52			H		+-		·
INSTR. LOOP CONTAINING INDPEPTI3230 (32	YOU) 	╀		╁		-
	╀		 		╄		
	╁	<u> </u>	┡		╀		
	1		L		╄-		
	\vdash		_		<u> </u>	included in	
SUPPORT FOR NI SYSTEM	1		┖		1	Seismic PRA	Non-Safety
	L	<u> </u>	L		1_	L	<u> </u>
4160V AC SWITCHGEAR IETA (1ETB)	L		\perp		1	X	
600V AC MCC 1EMXA	L		Ĺ			X	
600V AC MCC 1EMXA-1			Γ			Х	
600V AC MCC 1EMXB-1	Γ		Γ		Π	X	
125V DC PANELBOARD 1EVDA (1EVDD)	T		Τ		1	X	
D/G LOAD ACTUATE RELAY 2EA(RA3) (2EA)	RB	3))	Τ		T	 	1
D/G LOAD SEQUENCER RELAY RA3 (RB3)	Ť	· ·	十		†		
D/G RELAY LSA1 (LSB1)	t	 	\vdash		+-	 	
OLO WILLIAM (MAI)	上		<u></u>	<u></u>	_ـــــــــــــــــــــــــــــــــــــ	L	

TABLE 4 -

		IABLE 4	-			•	
	Т		T		Γ	Included in	1
SUPPORT FOR NI SYSTEM (cont.)	T		T		Τ	Seismic PRA	Non-Safety
	十		\top		1		
D/G TEST RELAY DGTSA6 (DGTSB6)	1		T		T		
LIMIT SWITCH TO MOV INI147A	+		1		1	[
LIMIT SWITCH TO MOV INI185A (INI184B)	†		1		Τ		
NSTR. LOOP CONTAINING INILT/P 5260	十	<u> </u>	T		一		
NSTR. LOOP CONTAINING INILT/P 5270	十	 	T		一		
	十		+		H		
	╁		1		┢		
	┰		1		Г		
	十		1		Г	Included in	
SUPPORT FOR NV SYSTEM	1		1	•	Г	Seismic PRA	Non-Safety
	1		Ħ		一		
1160V AC SWITCHGEAR 1ETA (1ETB)	1	 	1		 	X	
500V AC MCC 1EMXA	1		\sqcap		┢	X	
500V AC MCC 1EMXB-1	†				Г	X	
SOOV AC MCC 1EMXB-2	✝		T	!	Г	X	<u> </u>
125V DC PANELBOARD IEVDA (1EVDD)	1		1			X	
D/G AUTO RESET RELAY ED(IRA3) (ED(IRB3	n)		Ħ		_		
D/G LOAD ACTUATE RELAY 2DA(RA2) (2DA		21)	H				
D/G TEST RELAY TSA2 (TSAB)	T	ř—–	T		┝		
CONTAINMENT HIGH PRESS. CHANNEL 2 BISTA	BLE	(ESFAS)					
CONTAINMENT HIGH PRESS. CHANNEL 2 TRAN			AS)				1.
CONTAINMENT HIGH PRESS, CHANNEL 3 BISTA			Ī		Г		
CONTAINMENT HIGH PRESS. CHANNEL 3 TRAN	_		AS)		Ι-		T
CONTAINMENT HIGH PRESS. CHANNEL 4 BISTA			П				
CONTAINMENT HIGH PRESS, CHANNEL 4 TRAN	ISM	ITTER (ESF.	AS)				
ESFAS INPUT RELAY K131A (K131B)	Т		П		_		
ESFAS INPUT RELAY K133A (K133B)	7		П				
ESFAS INPUT RELAY K201A (K201B)	T						
ESFAS INPUT RELAY K217A (K271B)	T		П				
ESFAS INPUT RELAY K247A (K247B)	T						
ESFAS INPUT RELAY K330A (K330B)	T		\sqcap				
ESFAS INPUT RELAY K344A (K344B)	T				Г		
ESFAS INPUT RELAY K417A (K417B)	T		П				
ESFAS INPUT RELAY K430A (K430B)	Τ		П	•			
ESFAS INPUT RELAY K444A (K444B)	7		П				
ESFAS LOGIC MODULE A210A (A210B)	7		Γ		Г		
ESFAS LOGIC MODULE A213A (A213B)	7		T				
ESFAS LOGIC MODULE A308A (A308B)			Т		Г		
ESFAS LOGIC MODULE A313A (A313B)	7			•	Г		
ESFAS LOGIC MODULE A411A (A411B)	T		T				
ESFAS LOGIC MODULE A416A (A416B)			\top		Г		
ESFAS MASTER RELAY K501A (K501B)	1		Τ		Γ		
ESFAS SLAVE RELAY K603A (K603B)	\top	1	+		Ι-		
ESFAS SLAVE RELAY K607A (K607B)	╁		1		┢		
LOW STEAMLINE PRESSURE CHANNEL 1 BISTAB	F	(ESFAS)	+		<u> </u>		~
LOW STEAMLINE PRESSURE CHANNEL 1 TRANS	_		~		\vdash	 	
	_		~ ~		⊢	ļ	
LOW STEAMLINE PRESSURE CHANNEL 2 BISTAB	u -	(ESEAS)		ŀ	1	, ,	1

TABLE 4 -

							
	上		_		1	Included in	
SUPPORT FOR NV SYSTEM (cont.)					I	Seismic PRA	Non-Safet
					Г		
OW STEAMLINE PRESSURE CHANNEL 4 BISTAB	Æ	(ESFAS)	Γ		T		
LOW STEAMLINE PRESSURE CHANNEL 4 TRANS	VII	TER (ESFAS	3)		1		
PRESSURIZER LOW PRESSURE CHANNEL I BISTA	IBL	E (ESFAS)	Π		T		
PRESSURIZER LOW PRESSURE CHANNEL I TRAN	JSN	IITTER (ESF	AS)	1		
PRESSURIZER LOW PRESSURE CHANNEL 2 BISTA			Π	Γ	十		
PRESSURIZER LOW PRESSURE CHANNEL 2 TRAN			AS	·	1		
PRESSURIZER LOW PRESSURE CHANNEL 3 BISTA					1		
PRESSURIZER LOW PRESSURE CHANNEL 3 TRAN			AS	\	+	1	
NSTR. LOOP CONTAINING INVFE/FT/SS/P 5620					1	t	
NSTR. LOOP CONTAINING INVFE/FT/SS/P 5630	_				+		
	T			<u> </u>	1		
	1				\top		
	T				†	 	
	T		Τ		\top	Included in	
PROCESS CONTROL CABINETS	T		T		1	Seismic PRA	Non-Safet
	\dagger				T		1
	T				\top	-	
	T	 -	Г		\top		1
	╁	l			十	included in	
SUPPORT FOR RN SYSTEM	十		Н		十	Seismic PRA	Non-Safet
00// 00// / 00/ (1// 0/01/01/	十				╁╴	1 00001110	110/100/01
4160V AC SWITCHGEAR IETA (1ETB)	┰	· · · · · · · · · · · · · · · · · · ·	┢		╁	X	
600V AC MCC 1EMXA	╁╌		\vdash		十	l \hat{x}	
600V AC MCC 1EMXB-2	十		-		十	x	
SOOV AC MCC 1EMXE	十				十	x	-
500V AC MCC TEMXH	十				+	X	-
500V AC MCC 1EMXH-1	t^-				╁╴	x	
SODY AC MCC 2EMXH	十				+	l x	
125V DC DISTRIBUTION CENTER 1EVDA (1EVE	7			 -	十	·X	
D/G LOAD SEQUENCER RELAY 21A(RA7) (21A					╁		
D/G LOAD SEQUENCER RELAY LSA1 (LSB1)	Ť	""	-		╁╴		
D/G LOADING TRANSIENT ADVANCE TIMER RI	<u> </u>	V SEDIATA	5)	(2ED(ATRS))	╁╌	 	
D/G SEQUENCE TIMER RELAY HA(ST7A) (HA			ř	(200)///	十	 	
D/G TEST RELAY 2FB(TSA4) (2FB(TSB4))	Ť	1	 		╁	 	
INSTR. LOOP CONTAINING 1RNPG/PS5000 &	5/V	210 0211	<u>~</u>	20. 0221	-}	 	
(5010 & 0250, 0251, 0260, 0261)	T	210,0211,	ÜΣ.	20.0221	╁╴	 	
NSTR. LOOP CONTAINING TRNPT/PS/P 5020 (<u> </u>	0)	-		╬╌	 	
INSTR. LOOP CONTAINING TRNFE/FT/P 5040 &			7 &	5051)	╁╌	<u> </u>	
INSTR. LOOP CONTAINING TRAFE/FT/P 5040 &			78	30317	╂┈		
INSTR. LOOP CONTAINING TRIFE/FT/P 5220 (INSTR. LOOP CONTAINING TRIFE/FT/P 5360 &			27	D & 5271\	╁	 	+
HOIR. LOOP CONTAINING TRINFE/FIJF 3300 00	-	15 mol (2	<u>٧/١</u>	0 00 00/17	+	 	
	╀╌	 	+		+-	 	
	+-	 	├-	 	╀	 	
DEACTOR DOOTSTOLL MOTEL	╀	 	├-	ļ	4-	<u> </u>	1
	1_	 	L	 	1	 	Non-Safet
REACTOR PROTECTION SYSTEM					ı	. 2	C .
	╀		-	<u> </u>	┵	 	
REACTOR TRIP BREAKER A (B) REACTOR TRIP BYPASS BREAKER A (B)					上		

TABLE 4 -

		IABLE 4				•	
	T		Π		T	Included in	1
SUPPORT FOR SM, SV SYSTEMS	T		Γ		\top	Seismic PRA	Non-Sofet
	T		Γ		\top		· ·
500V AC MCC 1EMXA-2	T				1	X	
500V AC MCC IEMXB-4	T		Г		$\neg \vdash$	X	
NSTR. LOOP CONTAINING 18MSV0010 (0011)), (0	013) & LLO)10	,0011	1		—
NSTR. LOOP CONTAINING 15MSV0030 (0031)					\top		
NSTR. LOOP CONTAINING 1SMSV0050 (0051)	100	053) & LLO)50	, 0051	1		
NSTR. LOOP CONTAINING 1SMSV0070 (0071)							
NSTR. LOOP CONTAINING ISMSV/LL/ML0090							
INSTR. LOOP CONTAINING ISMSV/LL/ML0100	(S	V0101)			7		
INSTR. LOOP CONTAINING ISMSV/LL/ML0110	(S	V0111)			\top		
NSTR. LOOP CONTAINING ISMSV/LL/ML0120					1		
NSTR. LOOP CONTAINING 1SMFE/FT/P 5000.	TR	CPS, FWCS	()	E/FT/P 5010. F	RCP.	S, FWCS)	
NSTR. LOOP CONTAINING 1SMFE/FT/P 5020.							
NSTR. LOOP CONTAINING ISMFE/FT/P 5040,							
NSTR. LOOP CONTAINING ISMFE/FT/P 5060.							
NSTR. LOOP CONTAINING 1SMPT/P 5080 &			Ň		T		
NSTR. LOOP CONTAINING ISMPT/P 5090 &					1		1
NSTR. LOOP CONTAINING ISMPT/P 5100 &					丁		
NSTR. LOOP CONTAINING ISMPT/P 5110 &					\top		1
NSTR. LOOP CONTAINING ISMPT/P 5120 &	RC	25			1		
NSTR. LOOP CONTAINING ISMPT/P 5130 &	RC	25			\top		
NSTR. LOOP CONTAINING 1SMPT/P 5140 &	RC	PS .			1		
NSTR. LOOP CONTAINING 19MPT/P 5150 &					7		
NSTR. LOOP CONTAINING 19MPT/P 5160 &	RCI	PS	П		\top		1
NSTR. LOOP CONTAINING 15MPT/P 5170 &	RC	P\$			7		
NSTR. LOOP CONTAINING ISMPT/P 5180 &	RCI	* \$			\top		
NSTR. LOOP CONTAINING 15MPT/P 5190 &	RC	S			\top		
	L				T		
	\mathbf{L}				T		
					П		
	П					Included in	T -
					7	Seismic PRA	Non-Safet
SOLID STATE PROTECTION SYSTEM	Τ					X	
					\top		1
					T		.1
	Т						
	T		П		\top	included in	
SUPPORT FOR VA SYSTEM - #					1	Seismic PRA	Non-Safet
	7				7		
POWER SUPPLY FOR VA SYSTEM	1		П		7		X
	T		П		┰		T
	1				\top		T
	1		Г		1		1
	1		Т		\top	Included in	1
SUPPORT FOR VC SYSTEM - #	1-		-		+	Selsmic PRA	Non-Safet
	1	 	-		+	-555 1,01	1.101100101
600V AC MCC 1EMXH	十				+		
200 - 10 1100 101041	┪	 	- -		-}-	 	
		ı			•	;	

TABLE 4 -

			Included in	
SUPPORT FOR YC SYSTEM - #			Seismic PRA	Non-Safety
4160V AC SWITCHGEAR 1ETA (1ETB)				
4160V AC SWITCHGEAR 2ETA (2ETB)				
600V AC MCC 1EMXG				1
600V AC MCC 2EMXG				
600V AC MCC 1EMXH				
600V AC MCC 2EMXH				
120V AC PANELBOARD EKA (EKB)				
120V AC PANELBOARD KXA				
→ - only cursory review of these component	ts require	9		

TABLE 5 -

		IABLE 5					
ELECTRICAL EQUIPMENT LIST FO) 	MCGU	IR	E UNIT	2 IPI	EE WALKDO	OWN
	╀		╀			included in	
AREA TERMINATION CABINETS	╁	 	1-	 		Seismic PRA	Non-Safety
AREA TERIVINATION CABINETS	╁	 	+-	 		JOSHNIC FRA	Norsalely
	╁	 	╁╴	 	-	 	-} -
	╁	 	╁╌			 	-}
	╁	 	╁			Included in	
AUXILIARY SHUTDOWN PANEL	╁	 	┢			Seismic PRA	Non-Safety
ADDIENTI GIOLOGIA I TAVEL	十	 	╁		 }-	X	Tron ouren
	╁╴	 	╁			 	-
	╁	 	╁			 	
	十		╁╌			 	
	╁	 	╁╴			Included in	
SUPPORT FOR CA SYSTEM	╁	 	╁╴			Seismic PRA	Non-Safety
SOFFORT TOR CA STOLLY	╁		╁			JOSHING FRA	INDIFICIETY
4160V AC SWITCHGEAR 2ETA (2ETB)	╁╴	 	╀			1 x	
600V AC MCC 2EMXA (2EMXB) (2EMXB-2)	t		+			1 x	
600V AC MCC 2EMXA-4	╁		╆			1 ×	
600V AC MCC 2EMXA-5	十	 	╁╌			1 x 1	
125V DC DISTRIBUTION CENTER 2EVDA (2EVI	ואר		-			1 x 1	
125V DC PANELBOARD 2EVDA (2EVDB)	T	 	-			1	
120V AC PANELBOARD 2EVKA (2EVKB) & M		ILIAL TOAN	ISE!	D SWITC	·u	x	
LOCAL MOTOR-DRIVEN PUMP CONTROL PA			T T	IK SAALIC	"' 	 x	
LOCAL TURBINE-DRIVEN PUMP CONTROL PA			╁╴			x	-
ESFAS TRAIN A (8) 48V DC POWER SUPPLIES		Ť	-			 	
BATTERY EVCA (EVCB)	+	 	+			 	
BATTERY CHARGER EVCA (EVCB)	┢	 	╁┤			 	
DC CIRCUIT BREAKER FOR MDP2A (MDP2B)	Δì	TOSTADI	\vdash		 -	 	
INVERTER 2EVIA (2EVIB)	ί̈	I	\vdash			 	
TD PUMP RELAY HF	┢	 	1			 	
MFW PUMP RELAY BB(A) (BB(B))	╁╴	 					
MFW PUMP RELAY R/TT(FPTCB)	╌		╁╌		—— -	 	+
MFW PUMP RELAY R/TT-1 (FPTCA) (R/TT-1 (FP		B))	1			 	
RELAY R25C(A) (R25C(B))	ΪŤ	<u> </u>				 	
RELAY K609A (K609B)	┢	 					
RELAY LRAG (LRBG)	十		┰				
LOAD SHED RELAY LSA1 (LSB1)	十		+				
TEST RELAY TSA2 (TSB2)	十		十				
ESFAS SLAVE RELAY K633A (K633B)	十	 	\vdash			 	
ESFAS SLAVE RELAY K634A (K634B)	╁╌	 	╁╴			 	-
ESFAS MASTER RELAY K516A (K516B)	╁	 	╆			 	
ESFAS INPUT RELAY K113A (K113B)	╁	 	╁╌			 	
ESFAS INPUT RELAY K114A (K114B)	╁╌	 	╀			 	
ESFAS INPUT RELAY K121A (K121B)	╁	 	 -			 	+
ESFAS INPUT RELAY K150A (K150B)	╁	 	1-			 	
ESFAS INPUT RELAY KISUA (KISUB)	╁	 	1			 	
ESFAS INPUT RELAY K23UA (K23UB) ESFAS INPUT RELAY K231A (K231B)	╀	 	-			 	-}
	╁	 	1			 	
ESFAS INPUT RELAY K250A (K250B)	+	 	╄-			 	
ESFAS INPUT RELAY K255A (K255B)	╄	 	╄			ļ\	
ESFAS INPUT RELAY K331A (K331B)	┖	<u> </u>	L	L			

TABLE 5 -

SUPPORT FOR CA SYSTEM (cont.) Selsmic PRA Non-Sofely ESFAS INPUT RELAY K332A (0332B) ESFAS INPUT RELAY K333A (0333B) ESFAS INPUT RELAY K333A (0333B) ESFAS INPUT RELAY K333A (0333B) ESFAS INPUT RELAY K33AA (0333B) ESFAS INPUT RELAY K408A (0408B) ESFAS INPUT RELAY K409A (0408B) ESFAS INPUT			TABLE 5 -	•				
SUPPORT FOR CA SYSTEM (cont.) Sesmic PRA. Non-Sofety ESFAS INPUT RELAY K332A (0332B) ESFAS INPUT RELAY K332A (0332B) ESFAS INPUT RELAY K332A (0334B) ESFAS INPUT RELAY K403A (0434B) ESFAS INPUT RELAY K407A (407B) ESF		Γ				Т	Included in	7
ESFAS INPUT RELAY K332A (0332B) ESFAS INPUT RELAY K333A (0333B) ESFAS INPUT RELAY K334A (0334B) ESFAS INPUT RELAY K334A (0334B) ESFAS INPUT RELAY K409A (0407B)	SUPPORT FOR CA SYSTEM (cont.)	1		_		_		Non-Safety
ESFAS INPUT RELAY K334A (#334B) ESFAS INPUT RELAY K334A (#334B) ESFAS INPUT RELAY K434A (#347B) ESFAS INPUT RELAY K409A (#409B) ESFAS INPUT RELAY K410A (#409B		1-		-		_	500.110	11011 001017
ESFAS INPUT RELAY K334A (#334B) ESFAS INPUT RELAY K334A (#334B) ESFAS INPUT RELAY K434A (#347B) ESFAS INPUT RELAY K409A (#409B) ESFAS INPUT RELAY K410A (#409B	ESEAS INPLIT RELAY K332A (K332R)	 		-		-1-		-
ESFAS INPUT RELAY K407A (X407B) ESFAS INPUT RELAY K408A (X407B) ESFAS INPUT RELAY K408A (X408B) ESFAS INPUT RELAY K409A (X409B) INSTIL LOOP CONTAINING EXALLIP INVIAMOSO (X400B) INSTIL LOOP CONTAINING EXALLIP INVIAMOSO (X400B) INSTIL LOOP CONTAINING EXALLIP INVIAMOSO (X400B) INSTIL LOOP CON		\vdash	···	H		-{-	- -	
ESFAS INPUT RELAY K407A 040775) ESFAS INPUT RELAY K408A 0408B) ESFAS INPUT RELAY K410A 0410B) ESFAS INDUT RELAY K410A 0410B) ESFAS INDUT RELAY K410A 0410B) ESFAS INDUT RELAY K410A 0410B		╌		-			 	
ESFAS INPUT RELAY KADBA (MADB) ESFAS INPUT RELAY KADDA (MADB) D/G LOAD SEQUENCER RELAY A3 (B3) D/G LOAD SEQUENCER RELAY A3 (B3) ESFAS INDUT RELAY KADDA (MADB) D/G LOAD SEQUENCER RELAY A3 (B3) ESFAS LOCIC WATER LEVEL CHANNEL 1 BISTABLE SG A LOLIO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG A LOLIO WATER LEVEL CHANNEL 2 BISTABLE SG A LOLIO WATER LEVEL CHANNEL 3 BISTABLE SG A LOLIO WATER LEVEL CHANNEL 3 BISTABLE SG A LOLIO WATER LEVEL CHANNEL 4 BISTABLE SG A LOLIO WATER LEVEL CHANNEL 4 BISTABLE SG A LOLIO WATER LEVEL CHANNEL 4 BISTABLE SG A LOLIO WATER LEVEL CHANNEL 1 BISTABLE SG B LOLIO WATER LEVEL CHANNEL 1 BISTABLE SG B LOLIO WATER LEVEL CHANNEL 1 BISTABLE SG B LOLIO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 3 BISTABLE SG B LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 4 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG B LOLIO WATER LEVEL CHANNEL 1 BISTABLE SG B LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG C LOLIO WATER LEVEL CHANNEL 1 BISTABLE SG C LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG C LOLIO WATER LEVEL CHANNEL 1 BISTABLE SG C LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG C LOLIO WATER LEVEL CHANNEL 1 BISTABLE SG C LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG C LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG C LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG D LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG D LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG D LOLIO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG		┝	-	-		╌	 -	
ESFAS INPUT RELAY KADOA (KAIDB) ESFAS LOGIC MODULE A317A (A317B) D/G LOAD SEQUENCER (LOAD ACTUATE) RELAY 2JA(RAB) (2JA(RBB)) D/G LOAD WATER LEVEL CHANNEL 1 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEV		┞		_		-	-	
ESFAS INFUT RELAY KA10A (XA10B) SSFAS LOGIC MODULE A317A (A317B) D/G LOAD SEQUENCER RELAY A3 (B3) D/G LOAD SEQUENCER RELAY A3 (B3) SG A LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LE		┞-		_		╌	 	
ESFAS LOGIC MODULE A317A (A317B) D/G LOAD SEQUENCER (LOAD ACTUATE) RELAY 2.1A(RAB) D/G LOAD SEQUENCER RELAY A3 (B3) D/G LOAD SEQUENCER RELAY A3 (B3) SG A LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG A LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL 4 BI		L		_				-
D/G LOAD SEQUENCER (LOAD ACTUATE) RELAY 2JA(RAB) (2JA(RBB)) D/G LOAD SEQUENCER RELAY A3 (B3)		<u> </u>		_		┿	-	
D/G LOAD SEQUENCER RELAY A3 (83) SG A LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG A LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 5 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CH		<u> </u>		Ļ				
SG A LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG A LO-LO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG A LO-LO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 1 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 2 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG B LO-LO WATER LEVEL CHANNEL 4 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG C LO-LO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG C LO-LO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG C LO-LO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG C LO-LO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG C LO-LO WATER LEVEL CHANNEL 1 LEVEL TRANSMITTER SG C LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 3 LEVEL TRANSMITTER SG C LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG C LO-LO WATER LEVEL CHANNEL 3 BISTABLE SG D LO-LO WATER LEVEL CHANNEL		<u> </u>	2JA(RA8)	<u>(2</u> ,	JA(RB8))	4		.
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INSTR. LOOP CONTAINING 2CALL/P/SV/ML0600 (0400)								
INSTR. LOOP CONTAINING 2CALL/P/SV/ML0600 (0400) INSTR. LOOP CONTAINING 2CALL/P/SV/ML0640 (0360)					<u> </u>			
INSTR. LOOP CONTAINING 2CALL/P/SV/ML0640 (0360)	INSTR. LOOP CONTAINING 2CALL/P/SV/MLO	XXX	(0400)			\prod		1
	INSTR. LOOP CONTAINING 2CALL/P/SV/MLO	540	(0360)			T		1

TABLE 5 -

		IMDLE 0					
	Т		T	1	Т	Included in	
SUPPORT FOR CA SYSTEM (cont.)	Τ		T		T	Seismic PRA	Non-Safet
	7		T		Τ		
INSTR. LOOP CONTAINING 2CAFE/PS/FT/P 50	$\overline{000}$	(5010), P	<u>\$50</u>	01 (5011). & (PS5	002 (5012)	
INSTR. LOOP CONTAINING 2CAPS/PT/P 5020	(5	030)	T		Ť		
INSTR. LOOP CONTAINING 2CAFE/PS/FT/P 50			PS	042 & PS504	4		
INSTR. LOOP CONTAINING 2CAPS/PT/PG/P			Ť	1	Ť		
INSTR. LOOP CONTAINING 2CAPS/PT/P 5070			十	· · · · · · · · · · · · · · · · · · ·	1		<u> </u>
INSTR. LOOP CONTAINING 2CAFE/FT/P 5090			509	(5111)	✝		
INSTR. LOOP CONTAINING 2CAFE/FT/P 5100					✝	 	
INSTR. LOOP CONTAINING 2CAPS/PT/P 5160			T	32.2.7	十		†
INSTR. LOOP CONTAINING 2CFLT/P 5490	T		t		1		
INSTR. LOOP CONTAINING 2CFLT/P 5500	╈		T		†		
INSTR. LOOP CONTAINING 2CPLT/P 5510	†		Ť		T		
INSTR. LOOP CONTAINING 2CFLT/P 5520	+		T		✝		-
INSTR. LOOP CONTAINING 2CFLT/P 5530	十		T		1		1
INSTR. LOOP CONTAINING 2CFLT/P 5540	十		╁~		\vdash		
INSTR. LOOP CONTAINING 2CFLT/P 5550	╁	·	1		+		
INSTR. LOOP CONTAINING 2CRT/P 5560	+		╁╴		╁	 	-}
INSTR. LOOP CONTAINING 2CFLT/P 5570	†	· · · · · · · · · · · · · · · · · · ·	十		╁		
INSTR. LOOP CONTAINING 2CRT/P 5580	十		╁╴	 	╁╌	<u> </u>	
INSTR. LOOP CONTAINING 2CFLT/P 5590	╈		†-		╁		
INSTR. LOOP CONTAINING 2CPLT/P 5600	╁		╁		1		
INSTR. LOOP CONTAINING 2CPLT/P 6000	十		T		t		
INSTR. LOOP CONTAINING 2CRT/P6010	+		十	·	1		
INSTR. LOOP CONTAINING 2CFLT/P 6020	十		┪		十		
INSTR. LOOP CONTAINING 2CFLT/P 6030	十		十		t		-
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	1		╈		1	Included in	
SUPPORT FOR DIESEL GENERATORS	+		T		†	Seismic PRA	Non-Safet
	1		T				1
4160V AC SWITCHGEAR 2ETA (2ETB)	1			· · · · · · · · · · · · · · · · · · ·	\vdash	X	
600V AC LOAD CENTER 2ELXA (2ELXB)	†		十		t	Х	
600V AC LOAD CENTER 2ELXC (2ELXD)	†		t		┢	X	-
600V AC LOAD CENTER 2ELXE (2ELXF)	1		十		t	X	-
600V AC MCC 2EMXA (2EMXB)	1-		T		一	X	
600V AC MCC 2EMXE	+-		╁		╁╴	x	
120V AC PANELBOARD 2DG2A (2DG2B)	十		十		十	$\frac{2}{x}$	
125V DC PANELBOARD 2EVDA (2EVDD)	╅		+-		┰	X	
125V DC BATTERY / RACK	 -		╁╴		†-	X	1
INVERTER	+		╁		╁╴	x	
D/G CONTROL PANELS	+	 	+		十	x	
BATTERY 2EDGA (2EDGB) AND CHARGERS	+	 	╁╌		+	x	
BATTERY 2EDGA (2EDGB) INPUT & OUTPUT	BD!	AKEDS	+		╁	 	
600 / 120V AC TRANSFORMER TO PANELBOA			7	190	╀	 	
BREAKER DG2A-2 (DG2B-2)	T	ZUGZA (Z	1	740)	╁╌	 	-
AUTO RESET RELAY ED(TRA3) (ED(TRB3))	十	 -	╁╌		╁	 	
		L	1_	1	1		
BLACKOUT RELAY DC(BOA) (DC(BOB))	Т		T		1		

TABLE 5 -

		IABLE 5					
	Т		Γ		Т	Included in	
SUPPORT FOR DIESEL GENERATORS (cont.)	T		_		1	Seismic PRA	Non-Safety
	1-		-	<u> </u>	+	0001110 1101	71077001017
DEFEAT TEST RELAY FB(DTSA) (FB(DTSB))	┿		-		╁╌		
D/G START RELAY 2TRA(A) (2TRA(B))	╁	 	├-		╁		
D/G START RELAY 2TRA1(A) (2TRA1(B))	╁		┝	 	╀	l	
	╄	 	-		┿	 -	
D/G START RELAY 2TRB(A) (2TRB(B))	+-	ļ	L		╀	-	
D/G START RELAY 2TRC(A) (2TRC(B))	Ť	<u> </u>	_		 		
DIESEL STARTING AIR RELAY RVG1(A) (RVG			<u> </u>		1		
DIESEL STARTING AIR RELAY RVG2(A) (RVG			-	ļ	4		
DIESEL STARTING AIR RELAY RVG3(A) (RVG	<u>3(B</u>))	L		<u> </u>	ļļ.,	ļ
D/G AUTOSTART RELAY DASR(A) (DASR(B))	↓_		L		↓_		
LOAD SHED RELAY AB(LSA1) (AB(LSB1))	L				1_		<u> </u>
LOAD SHED RELAY AA(LSA2) (AA(LSB2))	L				1		
LOAD SHED TIMER RELAY GC(LSAT) (GC(LS	<u>81)</u>)			L		
LOGIC TIMER RELAY FD(LT1A) (FD(LT1B))	L		Ĺ		L		
LOGIC TIMER RELAY FD(LT2A) (FD(LT2B))	\prod				Γ		
RELAY AC(127ZBX)	Γ				Т		
RELAY AE(127XBX)	Γ				T		
RELAY 3CR(A) (3CR(B))	Т		П		T		
RELAY ART(A) (ART(B))	Τ				1		
RELAY DG IFRA (DG IFRB)	T						
RELAY ESX(A) (ESX(B))	十				╈		-
RELAY 2TRA(A) (2TRA(B))	✝				+-		
RELAY FC(TRA1) (FC(TRB1))	\vdash				†		
RELAY HRA(AA) (HRB(BB))	十				+		
RELAY RTD(A) (RTD(B))	十				十		-
RELAY STATX(A) (STATX(B))	H				+-		
RELAY SIA2X(A) (SIA2X(B))	十		_		╁╌		
RELAY SIA4X(A) (SIA4X(B))	╁╴		\dashv		╁╌		
RELAY TSA3 (TSB3)	╁╴		-		╁		
RESET RELAY EB(RRA) (EB(RRB))	十		-		╁		
RESTART RELAY FA(RGA) (FA(RGB))	╁		-		╁╌		
UNDERVOLTAGE RELAY 4CA(A) (4CA(B))	╁	 -	-		╁		
UNDERVOLTAGE RELAY 4DA(A) (4DA(B))	╁	<u> </u>	_		╂		
	<u></u>	1222	-		+-		
UNDERVOLTAGE RELAY AC(127ZAX) (AC(12			-		╂		·
UNDERVOLTAGE RELAY AD(127YAX) (AD(12			_		╄	<u> </u>	
UNDERVOLTAGE RELAY AE(127XAX) (AE(12	<u> </u>	3X))	Ш	<u></u>	上		.}
RESET SWITCH 4CC(A) (4CC(B))	╄-	 	_		1		
RESET SWITCH EG135	L	<u> </u>			1		
SPEED SWITCH S2 A2 (S2 B2)	L				上		
SPEED SWITCH S2 A2 (S2 B2)	L	<u> </u>		L	L		
INSTR. LOOP CONTAINING 2FDLS5040 & LS50							
INSTR. LOOP CONTAINING 2LDPG/PS5120 & PS	51	21/5122/51	23	(5130 & 513	1/5	132/5133)	
INSTR. LOOP CONTAINING 2LDPT/PG5360 (53			Γ		Т		
INSTR. LOOP CONTAINING 2VGPG/PS5040 & F			360	& 5070)	1		1
INSTR. LOOP CONTAINING 2VGPG/PS5080 (50					†		
INSTR. LOOP CONTAINING 2VGPG/PS5120 & F			<u>/</u> 0	& 51421	T	-	·
INSTR. LOOP CONTAINING 2VGPG/PS5130 & F					╁	 	
HIGH. COOL CONTINUING EVERGIT SO 130 & F	윈	1 132 (31	Ľ	G 31323	┿	 -	
J	╁	ļ	\vdash	 	╁	 	
L	┸	L	L_,	L		<u></u> _	

TABLE 5 -

		JABLE 5	-				
	Τ		Π		Γ	Included in	
SUPPORT FOR FW SYSTEM	1		Г		Γ	Seismic PRA	Non-Safety
	T		1-		一		1
NSTR. LOOP CONTAINING 2FWLT/P 5000	+-		\vdash		┢		
NSTR. LOOP CONTAINING 2FWLT/P 5010	+		-		┢		-
INSTR. LOOP CONTAINING 2FWLT/P 5020	十		\vdash		╁╌	 	-
1451K. LOOP CONTAINING 2141/P 3020	╁╴				┝	 	
	╀		-		┝	 	- -
<u></u>	╄	 _	-		ļ		
	╄-		<u> </u>		L		
	╀		_		L	Included in	
SUPPORT FOR KC SYSTEM	4				L	Seismic PRA	Non-Safety
	1				L		
4160V AC SWITCHGEAR 2ETA (2ETB)	L				L	X	
500V AC MCC 2EMXA (2EMXB)	L				L	X	
125V DC PANELBOARD 2EVDA (2EVDD)	L					X	
D/G ACCELRATED SEQUENCE RELAY 2DB(AA	2)	(2DB(AB2)					
D/G AUTO RESET AUXILIARY RELAY CC(TRA3)	X)	(CC(TRB3)	(1)				
D/G LOAD ACTUATE RELAY 2HA(RA6) (2H	AſR	B6)) .	Ϊ		Γ		1
D/G LOAD SEQUENCER RELAY LSA2 (LSB2)		*******					
D/G LOAD SEQUENCER RELAY RA6 (RB6)	†				_	 	-
DIG LOADING TRANSIENT ADVANCE TIMER R	EL/	Y 2AD(AT	111	(2AD(ATB11)	┢		~
D/G LOADING TRANSIENT ADVANCE TIMER R					-		-
DIG LOADING TRANSIENT ADVANCE TIMER R					┝	 	-
D/G LOADING TRANSIENT ADVANCE TIMER R					┝	 	
D/G SEQUENCE TIMER RELAY GA(ST4A) (G/			14)	(200(4164))	-	 	
			-		Ļ	 	
D/G SEQUENCE TIMER RELAY GB(ST2A) (GE			H		H		
D/G SEQUENCE TIMER RELAY HB(ST6A) (HB			-		L		_
D/G SEQUENCE TIMER RELAY HC(ST5A) (HC	<u> 131</u>	2R))	H		┡		-
D/G TEST RELAY 2FB(TSA4) (2FB(TSB4))	+		Ы			ļ	
ESFAS SLAVE RELAY KO10A (KO10B)	╀		Н		ļ	ļ	
TEST RELAY TSA1 (TSB1)	Ť				<u> </u>	 	
NSTR: LOOP CONTAINING 2KCPT/P 5490 (550					<u> </u>	<u> </u>	
INSTR. LOOP CONTAINING 2KCFE/FT/P 5530 (5			Ŀ		L		
NSTR. LOOP CONTAINING 2KCFE/FT/FS/SV/P 5	670	(5680)			L	<u> </u>	<u> </u>
	1_						
	${ m L}$						
	T		Г			Included in	
MAIN CONTROL BOARDS .	Т					Seismic PRA	Non-Safety
	T					X	
*	十						-
	+-		H		-	 	
	十		-		⊢	[-
	+	 	\vdash		\vdash	included in	-
SUPPORT FOR NC SYSTEM	╁╌		H		⊢	Seismic PRA	Non Cofet
SUFFORI FOR INC STSICIVI	+		 -		-	DESIDIC PKA	Non-Safety
ALANA A CHARACHACA CONTACTOR ACCORDAN	╀	<u> </u>	 -		 	 	
4160V AC SWITCHGEAR 2ETA (2ETB)	+		L		<u> </u>	<u> </u>	
600V AC LOAD CENTER 2ELXA (2ELXB)	4_		L		<u>_</u>	X	
600V AC LOAD CENTER 2ELXC (2ELXD)	_		L	\	L	X	
600V AC MCC 2EMXC (2EMXD)	\mathbf{L}		Γ		Ĺ	Х	
125V DC PANELBOARD 2EVDA (2EVDD)	T		Γ		Γ	X	
ACCELERATED SEQUENCE RELAY 2CB(AA1)	_	'	-		-		

TABLE 5 -

	Ī		T			included in	
SUPPORT FOR NC SYSTEM (cont.)	Τ		T		7	Seismic PRA	Non-Safety
	٢		T		\top		
ESFAS SLAVE RELAY K608A (K608B)	Τ		1		_		<u> </u>
ESG AUXILIARY RELAY BD(ESGAX2) (BD(ESG	BX	2))	1	i	+	·	
LOAD SHED RELAY AB(LSA2) (AB(LSB2))	Ī	<u> </u>	十		+-	<u> </u>	
MAXIMUM SEQUENCE TIMER RELAY BE(LT3A)	CF	E(LT3B))	+		┰		
RELAY 2AB(LRA4) (2AB(LRB4))	Ť		╁╌	 	╅	}}	
RELAY DC(BOA) (DC(BOB))	┝	 -	╁	 	┿	 	-
RELAY DA(LRA2) (DA(LRB2))	┝		╀		╬		
RELAY FC(TRA2) (FC(TRB2))	┝	 	╬		╌	 	-
	<u>~~</u>		╀		-		
SEQUENCER LOAD RELAY 2CA(RA2) (2CA(RB		 	╀	 	╬		-
SEQUENCER LOAD RELAY 2DA(RA2) (2DA(RB2			4		+-		
SEQUENCER TIMER RELAY JA(ST2A) (JA(ST2B	<u>"</u>		╄		- -		
TEST RELAY 2FB(TSA4) (2FB(TSB4))	├-		_				
TEST RELAY 2GB(TSA5) (2GB(TSB5))	L	<u> </u>	_		4		
UNDERVOLTAGE RELAY CB(127AX) (CB(127E			┺		4		
INSTR. LOOP CONTAINING 2NCSV0320 & SV03	_		_				
INSTR. LOOP CONTAINING 2NCSV0340 & SV0			1			<u> </u>	
INSTR. LOOP CONTAINING 2NCSV0360 & SV03	36		L				1
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	L		\mathbf{I}_{-}				
			Т		Т		
	Γ		Τ		Т	Included in	
SUPPORT FOR ND SYSTEM			T		T	Seismic PRA	Non-Safety
	Γ		T		1		
4160V AC SWITCHGEAR 2ETA (2ETB)	Γ		1		丁	X	
600V AC MCC 2EMXA (2EMXB-1)	┢		+		+	X	
125V DC DISTRIBUTION CENTER 2EVDA (2EVD	D)		†		_	X	<u> </u>
D/G LOAD ACTUATE RELAY 2FA(RA4) (2FA(F			十		1		<u> </u>
RELAY DGTSA6 (DGTSB6)	Ϊ	<u>" </u>	†		十		-
RELAY LSA1 (LSB2)	┢		+		+-		
INSTR. LOOP CONTAINING 2NDRD/P 5000 (5	אכנ	I) & ONIDA	<u> </u>	D ICDSOAD (50	7700		
INSTR. LOOP CONTAINING 2NDFE/FS5040 (50			۲	F /CROOD (O	""		
INSTR. LOOP CONTAINING 2NDPT/P 5090 (50			╁╴		╫		
INSTR. LOOP CONTAINING 2NDF1/F 5090 (50			╁	 	╫		-
HASIR. EOOP CONTAINING ZINDFEJFI3230 (32	2	′ 	╁╴		┿		
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	┡		╀~	<u> </u>	╬	Included in	
SUPPORT FOR NI SYSTEM	1		<u> </u>		丰	Seismic PRA	Non-Safety
	L		1_	· .			
4160V AC SWITCHGEAR 2ETA (2ETB)	L		L		L	X	
600V AC MCC 2EMXA	Ĺ				╧	X	
600V AC MCC 2EMXA-1	Ĺ				$oldsymbol{oldsymbol{oldsymbol{I}}}$	Х	
600V AC MCC 2EMXB-1	Γ		T		T	X	
125V DC PANELBOARD 2EVDA (2EVDD)			T		T	X	1
D/G LOAD ACTUATE RELAY 2EA(RA3) (2EA(ŔB.	3))	1		1		1
D/G LOAD SEQUENCER RELAY RA3 (RB3)	Ĺ	<u> </u>	十		\top		
D/G RELAY LSA2 (LSB2)	H		+-		+	 	
D/G TEST RELAY DGTSA6 (DGTSB6)	+	 	╁		+	 -	-
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TABLE 5 -

		IADLE 3	_			
	T		T		Included in	
SUPPORT FOR NI SYSTEM (cont.)	Т		1		Seismic PRA	Non-Safety
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LIMIT SWITCH TO MOV 2NI147A	1		1-		 	1
LIMIT SWITCH TO MOV 2NI185A (2NI184B)	T	 	†	 	 	1
INSTR. LOOP CONTAINING 2NILT/P 5260	+		╁╴	 	 	
INSTR. LOOP CONTAINING 2NILT/P 5270	╁		╁	 	-	
INSTR. COOP CONTAINING ZINICITE 3270	╄		┨	 	- -	
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l	╀		-			
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	╄	<u> </u>	 _	<u> </u>	Included in	
SUPPORT FOR NV SYSTEM	╀				Seismic PRA	Non-Safety
4160V AC SWITCHGEAR 2ETA (2ETB)	╀	 	╀		 	-{
600V AC MCC 2EMXA	╁		╁		X X	
	╀		╂	-		
600V AC MCC 2EMXB-1	┼-	 	╄-		X	ļ
600V AC MCC 2EMXB-2	╀		╄		X	
125V DC PANELBOARD 2EVDA (2EVDD)	Ť		╁_		<u> </u>	
D/G AUTO RESET RELAY ED(TRA3) (ED(TRB3		<u> </u>	1_		<u> </u>	·
D/G LOAD ACTUATE RELAY 2DA(RA2) (2DA	(R8	2))	L			
D/G TEST RELAY TSA2 (TSAB)		L	_			
CONTAINMENT HIGH PRESS. CHANNEL 2 BISTA	_				<u> </u>	
CONTAINMENT HIGH PRESS. CHANNEL 2 TRAN			4S)		<u> </u>	
CONTAINMENT HIGH PRESS, CHANNEL 3 BISTA						
CONTAINMENT HIGH PRESS. CHANNEL 3 TRAN	SM	ITTER (ESF/	45)			
CONTAINMENT HIGH PRESS. CHANNEL 4 BISTA	BLE	(ESFAS)				
CONTAINMENT HIGH PRESS, CHANNEL 4 TRAN	SM	TTER (ESF/	45)			
ESFAS INPUT RELAY K131A (K131B)	T		Г			
ESFAS INPUT RELAY K133A (K133B)	Г					
ESFAS INPUT RELAY K201A (K201B)	Т		Г			
ESFAS INPUT RELAY K217A (K271B)	1					
ESFAS INPUT RELAY K247A (K247B)	1		Π			
ESFAS INPUT RELAY K330A (K330B)	Т					
ESFAS INPUT RELAY K344A (K344B)	T		一		 	
ESFAS INPUT RELAY K417A (K417B)	+				 	
ESFAS INPUT RELAY K430A (K430B)	†		1	 	 	
ESFAS INPUT RELAY K444A (K444B)	+-		\vdash	 	 	
ESFAS LOGIC MODULE A210A (A210B)	+-		╌	 		
ESFAS LOGIC MODULE A213A (A213B)	╀╌		\vdash	 		
	╀		ļ -	 	 	·
ESFAS LOGIC MODULE A308A (A308B)	╄		-			
ESFAS LOGIC MODULE A313A (A313B)	┼-		 -	 	 	-
ESFAS LOGIC MODULE A411A (A411B)	╀	<u> </u>	 	ļ	 	<u> </u>
ESFAS LOGIC MODULE A416A (A416B)	\perp	<u> </u>	_			
ESFAS MASTER RELAY K501A (K501B)	┺		L			
ESFAS SLAVE RELAY K603A (K603B)	L		L			
ESFAS SLAVE RELAY K607A (K607B)			Γ			
LOW STEAMLINE PRESSURE CHANNEL 1 BISTAB	LE	(ESFAS)	Г			
LOW STEAMUNE PRESSURE CHANNEL 1 TRANS			;		1	
LOW STEAMLINE PRESSURE CHANNEL 2 BISTAB			Í		 	
LOW STEAMLINE PRESSURE CHANNEL 2 TRANS			,	 	 	
LOW STEAMLINE PRESSURE CHANNEL 4 BISTAB	_		Ť-	 	 	
TO THE WINDING THE PROPERTY OF	=-	(=0.7.40)				

TABLE 5 -

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	NSN ABU VSA ABU VSA O & O O O O O O O O O O O O O O O O O O	ABLE (ESFAS) NSMITTER (ESI ABLE (ESFAS) NSMITTER (ESI ABLE (ESFAS) NSMITTER (ESI D & 2NVFT/P 5 D & 2	NSMITTER (ESFAS) ABLE (ESFAS) NSMITTER (NSMITTER (ESFAS) ABLE (ESFAS) NSMITTER (ESFAS) ABLE (ESFA	NSMITTER (ESFAS) ABLE (ESFAS) NSMITTER (ESFAS) ABLE (ES	NSMITTER (ESFAS) ABLE (ESFAS) NSMITTER (ESFAS) ABLE (ESFAS) NSMITTER (ESFA	NSMITTER (ESFAS) ABLE (ESFAS) NSMITTER (ESFAS) ABLE (ESFAS) NSMITTER (ESFA

TABLE 5 -

	T				Τ	Included in	
· SUPPORT FOR SM, SV SYSTEMS	T				T	Selsmic PRA	Non-Safety
600V AC MCC 2EMXA-2	+	<u> </u>	-		+	x	-
600V AC MCC 2EMX8-4	\top		Γ		1	X	
INSTR. LOOP CONTAINING 2SMSV0010 (0011). (0	013) & LL00	iic	.0011	1		<u> </u>
INSTR. LOOP CONTAINING 25MSV0030 (0031					1		
INSTR. LOOP CONTAINING 2SMSV0050 (005)	100	053) & LL00	350	, 0051	T		
INSTR. LOOP CONTAINING 2SMSV0070 (007)	0	073) & LL00)70	,0071	1		
INSTR. LOOP CONTAINING 2SMSV/LL/ML0090) (S	V0091)			T		
INSTR. LOOP CONTAINING 2SMSV/LL/ML0100) (S	V0101)			T		
INSTR. LOOP CONTAINING 2SMSV/LL/ML0110	(\$	V0111)			Τ		
INSTR. LOOP CONTAINING 2SMSV/LL/ML0120	(\$	V0121)	Г		T		
INSTR. LOOP CONTAINING 2SMFE/FT/P 5000,	R	CPS, FWCS	Œ	E/FT/P 5010, R	CP	S, FWCS)	
INSTR. LOOP CONTAINING 2SMFE/FT/P 5020,	R	CPS, FWCS	Ū	E/FT/P 5030, R	CP	S, FWCS)	
INSTR. LOOP CONTAINING 2SMFE/FT/P 5040,							
INSTR. LOOP CONTAINING 2SMFE/FT/P 5060.							
INSTR. LOOP CONTAINING 2SMPT/P 5080 &					Т		
INSTR. LOOP CONTAINING 2SMPT/P 5090 &	RC	PS			Т		
INSTR. LOOP CONTAINING 2SMPT/P 5100 &	ŔĊ	PS			Τ		
INSTR. LOOP CONTAINING 2SMPT/P 5110 &	RC	PS .	Г		Τ		
INSTR. LOOP CONTAINING 2SMPT/P 5120 &	RC	PS			Τ		
INSTR. LOOP CONTAINING 2SMPT/P 5130 &	RC	PS			Г		
INSTR. LOOP CONTAINING 2SMPT/P 5140 &	RC	PS			Т		
INSTR. LOOP CONTAINING 2SMPT/P 5150 &	RC	P\$			Τ		
INSTR. LOOP CONTAINING 2SMPT/P 5160 &				•	L		
INSTR. LOOP CONTAINING 2SMPT/P 5170 &	RC	P\$			E		
INSTR. LOOP CONTAINING 2SMPT/P 5180 &	RC	PS					
INSTR. LOOP CONTAINING 2SMPT/P 5190 &	RC	PS			Γ		
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	\mathbf{L}			L	Γ	Included in	
SOLID STATE PROTECTION SYSTEM	\mathbb{I}				I	Seismic PRA	Non-Safety
	T		Γ		Т	Х	

TABLE 6 -

	IPE	EE WAI	KDOWN		1	i]
CONTAINMENT ISOLATION VALVES	-	Coople			1221		
AND PENETRATIONS	+-+	Penetr.	Verbia No	Line Che (in)	-	ve Pos	
AND PENEIRATIONS	┨╼┼	NO.	Valve No.	Line Size (in.)	Norm.	FOI	ACC
PPER COMPARTMENT PURGE INLET	╁┼	M367	IVPIB	24	c	С	c
PPER COMPARTMENT PURGE INLET	 	M367	IVP2A	24	Č	Č	č
PPER COMPARTMENT PURGE INLET	11	M454	IVP3B	24	č	C	l č
PPER COMPARTMENT PURGE INLET	 	M454 -	IVP4A	24	Č	č	c
OWER COMPARTMENT PURGE INLET	十	M357	1VP6B	24	č	Č	c
OWER COMPARTMENT PURGE INLET	+	M357	IVP7A	24	C	Č	č
OWER COMPARTMENT PURGE INLET	++	M456	1VP8B	24	č	c	Č
OWER COMPARTMENT PURGE INLET	1-1-	M456	IVP9A	24	č	Č	Č
ONTAINMENT PURGE EXHAUST	1-1-	M368	1VP10A	24	č	c	c
ONTAINMENT PURGE EXHAUST	1-1	M368	1VP11B	24	č	č	Č
ONTAINMENT PURGE EXHAUST	1-1-	M455	IVP12A	24	č	č	c
ONTAINMENT PURGE EXHAUST	1-1-	M455	IVP13B	24	č	Č	č
ONTAINMENT PURGE	1 1	M119	IVP15A	24	č	c	Č
ONTAINMENT PURGE		M119	IVP16B	24	č	č	C
CORE INSTR. ROOM PURGE IN	\vdash	M213	IVP17A	12	č	c	c
CORE INSTR. ROOM PURGE IN		M213	1VP18B	12	Č	Č	Č
CORE INSTR. ROOM PURGE OUT	11	M138	IVP19A	24	Č	C	Č
ORE INSTR. ROOM PURGE OUT		M138	IVP20B	24	c	c	c
ONTAINMENT AIR RELEASE		M243	IVQIA	6	C	С	C
ONTAINMENT AIR RELEASE		M243	IVQ2B	6	C	С	c
ONTAINMENT AIR ADDITION		M384	IVQ5B	6	С	С	C
ONTAINMENT AIR ADDITION		M384	IVQ6A	. 6	C	С	C
ONT. VENT UNITS COND. DRAINS TO DRN. TK.		M221.	1WL321A	6	0	Al	С
ONT, VENT UNITS COND, DRAINS TO DRN. TK.	П	M221	1WL322B	. 6	0	Al	C
QUIPMENT HATCH		******	10010000				
PPER CONTAINMENT PERSONNEL HATCH		C392	******				
OWER CONTAINMENT PERSONNEL HATCH		C152	******				
	П						
ERSONNEL AIR LOCK INFLATABLE DOOR SEALS	(INC	LUDING A	R SUPPLY SYSTEM)				
ERSONNEL AIR LOCK 208 V LINEAR ACTUATOR	S DO	OR LATCH	S				
MV AC MCC ICMVA	╁┼		 		 		
00V AC MCC 1EMXA 00V AC MCC 1EMXB	 -		-{		╟──┤		
25V DC PANELBOARD 1EVDA	╁┼		 		 		
25V DC PANELBOARD 1EVDB	╆╌┼╸		- 		 		
25V DC PANELBOARD 1EVDD	+		 		╫		
	╁╌┼╴		 		 		
20V AC PANELBOARD 1EKVA	╁┼		- 		 		
20V AC PANELBOARD 1EKVD	╁┷┼		 		 		

TABLE 6 -

•				_	
('B' train components are shown in parenthese	s. A detaile	d walkdown of the	se components is	not	
essary if the 'B' train configuration is similar	to the 'A' trai	n.)			
HYDROGEN MITIGATION SYSTEM					
		T			
GLOW PLUG IGNITERS					
600V AC MCC 1EMXA (1EMX8)				1	
TRANSFORMER HMTA (HMTB)			1	1 1	
TRANSFORMER 1EMXA (1EMXB)				1	
			 		
			† † * * * * * * * * * * * * * * * * * *	1	
ICE BASKETS & DOORS					
			 	1	
		T		1-1	
		 	 		
•	Line	Included in		1	
NS SYSTEM	Size (in.)	Seismic PRA		1	
			1 1		
NS PUMP 1A (18)		· x	-	11	
NS HX IA (1B)		- 	 - 		
		 	 - 		
4160V AC SWITCHGEAR 1ETA (1ETB)	 	 	 	#	
600V AC MCC 1EMXA (1EMXB)		 	 - 		
25V DC PANELBOARD 1EVDA (1EVDD)		 	 	╢	·
301 00 17412207412 127271 (127007		 	 	- 	
		†	 	╫─┼	
		 	 	-	
	Line	included in		- 	
VX SYSTEM	Size (in.)	Seismic PRA	 	1	
77. 014/217	020 (81.)	CONTROT NA	 	- 	
AIR-OP DAMPER 1RAF-D-5 (-8)		 - 		-	
		 - 			
AIR-OP DAMPER TRAF-D-6 (-9)		 - 	 	╫──┼	
AIR-OP DAMPER 1RAF-D-7 (-10)		 		╢╾╌╂	
MOTOR-OP ISOLATION DAMPER 1RAF-D-2 (-4)		 	 	╢━	
MOTOR-OF BODOTION DAINE BY TRAI-D-2 (-4)			 	-	
CONTAINMENT AIR RETURN FAN 1A (1B)	 	×	 - 		
COMPANY AND MENTION AND THE (ID)	 	 	 		
600V AC MCC 1EMXA (1EMXB)	 	1		╫╼╼┼	
600V AC MCC TEMXA (TEMXB)		 		- -	
120V AC PANELBOARD 1EKVA (1EKVD)	 	- 	 		
	baselisi ii				
PRESSURE TRANSMITTER 1VXPT5390 (Incl. assoc.	preaker, ak	orm module, & 48	dc power supply)		
(PRESSURE TRANSMITTER 1VXPT5380 (Incl. assoc	preaker, old	orm module, & 48	ac power supply)	<u>' </u>	
PRESSURE TRANSMITTER 1VXPT5500 (Incl. assoc.	preaker, ald	orm module, & 48	dc power supply)	4	
(PRESSURE TRANSMITTER 1VXPT5490 (incl. assoc.	breaker, ak	orm module, & 48	dc power supply)	<u> </u>	

TABLE 7 -

	IPEEE WAL	KDOWN		T		1
	IPEER WAL	RDOWN		₩	 	
				}	 	├
CONTAINMENT ISOLATION VALVES	Penetr.	-{		Vo.	ive Pos	Hion
AND PENETRATIONS	No.	Valve No.	Line Size (in.)	Norm		Acc
	1.5.	10,101,101	LS TO OLO (III.)	11.0.11.	10.	1
IPPER COMPARTMENT PURGE INLET	M367	2VP1B	24	С	C	C
IPPER COMPARTMENT PURGE INLET	M367	2VP2A	24	C	c	Ċ
IPPER COMPARTMENT PURGE INLET	M454	2VP3B	24	Č	C	Č
IPPER COMPARTMENT PURGE INLET	M454	2VP4A	24	c	C	C
OWER COMPARTMENT PURGE INLET	M357	2VP6B	24	Č	Ċ	Č
OWER COMPARTMENT PURGE INLET	M357	2VP7A	24	C	C	č
OWER COMPARTMENT PURGE INLET	M456	2VP8B	24	c	c	Č
OWER COMPARTMENT PURGE INLET	M456	2VP9A	24	č	c	Ť
CONTAINMENT PURGE EXHAUST .	M368	2VP10A	24	C	c	Ĉ
CONTAINMENT PURGE EXHAUST	M368	2VP11B	24	C	C	Č
CONTAINMENT PURGE EXHAUST	M455	2VP12A	24	Ċ	C	Č
CONTAINMENT PURGE EXHAUST	M455	2VP13B	24	C	C	Ť
CONTAINMENT PURGE	M119	2VP15A	24	Ċ	Ċ	Tc
CONTAINMENT PURGE	M119	2VP16B	24	С	C	Č
NCORE INSTR. ROOM PURGE IN	M213	2VP17A	12.	Ċ	Ċ	t č
ICORE INSTR. ROOM PURGE IN	M213	2VP18B	12	С	C	c
CORE INSTR. ROOM PURGE OUT	M138	2VP19A	24	c	C	Ĉ
ORE INSTR. ROOM PURGE OUT	M138	2VP208	24	C	C	c
CONTAINMENT AIR RELEASE	M243	2VQ1A	6	С	С	C
CONTAINMENT AIR RELEASE	M243	2VQ2B	6	C	C	Č
CONTAINMENT AIR ADDITION	M384	2VQ5B	6	С	C	C
CONTAINMENT AIR ADDITION	M384	2VQ6A	6	С	C	Ċ
CONT. VENT UNITS COND. DRAINS TO DRN. TK.	M221	2WL321A	6	0	Al	Č
CONT. VENT UNITS COND. DRAINS TO DRN. TK.	M221	2WL322B	6	Ò	Al ·	Č
QUIPMENT HATCH	******	******				
IPPER CONTAINMENT PERSONNEL HATCH	C392	*******	- 			
OWER CONTAINMENT PERSONNEL HATCH	C152	******				
						┢━━
PERSONNEL AIR LOCK INFLATABLE DOOR SEALS	UNCLUDING AL	R SUPPLY SYSTEM				
ERSONNEL AIR LOCK 208 V LINEAR ACTUATOR						
	1	Ť				
00V AC MCC 2EMXA	- -	 				
00V AC MCC 2EMXB		 				
25V DC PANELBOARD 2EVDA		 	-	 	 	
25V DC PANELBOARD 2EVDB	- -	 				
25V DC PANELBOARD 2EVDD	 	 		 		 -
20V AC PANELBOARD 2EVVA	 	 		 		
20V AC PANELBOARD 2EKVD		 		H 		
TOT TO FUNCTIONIN SERVI		 		 		├
		 		/		<u> </u>

TABLE 7 -

(B) train components are shown in parenthese			se components is	not	
cessary if the 'B' train configuration is similar	to the 'A' train	.)	 		
INDOCOCAL LARGO A POLL CACOTTA					
HYDROGEN MITIGATION SYSTEM			 		
010/110/10/10/10/10/10			 - 		
GLOW PLUG IGNITERS			<u> </u>		
KOOV AC MCC OFNAVA (OFNAVO)			 	╢	
SOOV AC MCC 2EMXA (2EMXB) TRANSFORMER HMTA (HMTB)	 		 - 		
RANSFORMER ZEMXA (ZEMXB)		- 	 -		
RANGPORIVIER ZEIVINA (ZEIVINB)			 		
			 	#	
			 		
ICE BASKETS & DOORS				╢──┤	
ICE BASKETS & DOCKS					
	- 		 - 		
···	<u> </u>		 	#	
	Line	Included in	 	-	
NS SYSTEM	Size (in.)	Seismic PRA		 	
140001	020 (11.17)	- CONTROLINA	 	#	
NS PUMP 2A (2B)		X	 		
NS HX 2A (2B)		X	 	11	
			 	11-1	
4160V AC SWITCHGEAR 2ETA (2ETB)					
600V AC MCC 2EMXA (2EMXB)					
25V DC PANELBOARD 2EVDA (2EVDD)					
	Line	Included in			
, VX SYSTEM	Ste (in.)	Seismic PRA			
AIR-OP DAMPER 2RAF-D-5 (-8)					
·					
AIR-OP DAMPER 2RAF-D-6 (-9)			·		
AIR-OP DAMPER 2RAF-D-7 (-10)					<u> </u>
MOTOR-OP ISOLATION DAMPER 2RAF-D-2 (-4)				.	
				┦——	
CONTAINMENT AIR RETURN FAN 2A (2B)		X	<u> </u>	 	
			 	╂	
500V AC MCC 2EMXA (2EMXB)			<u> </u>	#	
600V AC MCC 2EMXC (2EMXD)			<u> </u>	1	
120V AC PANELBOARD 2EKVA (2EKVD)				 	
PRESSURE TRANSMITTER 2VXPT5390 (incl. assoc.			dc power supply)		ļ
(PRESSURE TRANSMITTER 2VXPT5380 (Incl. assoc			dc power supply))		<u> </u>
PRESSURE TRANSMITTER 2VXPT5500 (Incl. assoc.			dc power supply)		
(PRESSURE TRANSMITTER 2VXPT5490 (incl. assoc.	breaker, ala	m module, & 48	dc power supply))		

ATTACHMENT 2 McGuire Unit 1 SWEL-1

Equipment #	Description	System	Class of Equipment	Building	Elev.	Room#	Column- Grid	Listed on IPEEE List	Major New/ Replacement Equipment	Prior IPEEE Discrepancy/ Enhancement	Safety Function
1CAPU0001	1A MDCAP	CA	05-Horizontal Pump	Aux Bidg	716	600/MDCAP		×			NC-Press, DH
1CA-PN-AFPA	MDCAP 1A Control Panel	CA	20-instrument and Control Panel	Aux Bldg	716	600/MDCAP	CC-61	х			NC-Press, DH
1CA-PN-AFTP	TDCAP Control Panel	CA	20-Instrument and Control Panel	Aux Bidg	716	600/TDCA Pump Rm		Х			NC-Press, DH
1CAPU0003	TDCAP	CA	05-Horizontal Pump	Aux Bidg	716	600/TDCA Pump Rm		х			NC-Press, DH
1CAHX0003	TDCAP Bearing Oll Cooler	CA	21-Tanks/HtXs	Aux Bldg	716	600/TDCA Pump Rm		х			NC-Press, DH
1CA-56A	MDCAP Flow Control to 1B SG	CA	07-AOV	Aux Bldg	7.16 +8	600/MDCAP Rm		х			NC-Press, DH
1SA-48ABC	TDCAP steam supply from 1C SG	SA	07-AOV	Inner Doghouse	767+10	Inner Doghouse		х			NC-Press, DH
1SA-49AB	TDCAP steam supply from 1B SG	SA	07-AOV	Inner Doghouse	767+11	Inner Doghouse		x			NC-Press, DH
1VGTK0062	1A1 EDG Starting Air Tank	VG	21-Tanks/HtXs	EDG Bldg	736.5	1A EDG Rm		Х			Various
1VGTK0063	1A2 EDG Starting Air Tank	VG	21-Tanks/HtXs	EDG Bidg	736.5	1B EDG Rm		Х	!		Various
1VGTK0064	1B1 EDG Starting Air Tank	VG	21-Tanks/HtXs	EDG Bldg	736.5	1A EDG Rm		х			Various
1VGTK0065	1B2 EDG Starting Air Tank	VG	21-Tanks/HtXs	EDG Bldg	736.5	1B EDG Rm		х			Various
1VG-61	EDG Sarting Air Solenoid	VG	08-MOV/SOV	EDG Bldg	736.5	1A EDG Rm		Х			Various
1VG-66	EDG Sarting Air Solenoid	VG	08-MOV/SOV	EDG Bldg	736.5	1B EDG Rm		х			Various
1B EDG	1B Ernergency Diesel Generator Set	EDG	17-Engine Generator	EDG Bidg	736.5	1B EDG Rm		х			Various
1KCTK0009	KC Surge Tank	кс	21-Tanks/HtXs	Aux Bidg	767	9	JJ-57	х			Various
1KCHX0005	1A KC HIX	кс	21-Tanks/HtXs	Aux Bidg	750	KC HIX Area	JJ-56	х			Various
1KCHX0006	1B KC HIX	кс	21-Tanks/HtXs	Aux Bldg	750	KC HtX Area	JJ-56	х		X - missing grout for saddle base and curb	Various
1KCPU0001	1A1 KC Pump	кс	05-Horizontal Pump	Aux Bidg	733	U1 KC Pump Area	GG-55	х			Various

Equipment #	<u>Qescription</u>	System	<u>Class of</u> Equipment	Building	Elev.	Room#	<u>Column-</u> <u>Grid</u>	Listed on IPEEE List	Major New/ Replacement Equipment	Prior IPEEE Discrepancy/ Enhancement	Safety Function
1KCPU0002	1A2 KC Pump	кс	05-Horizontal Pump	Aux Bidg	733	U1 KC Pump Area	GG-56	х			Various
1KC-50A	KC Aux Bldg Non-ESS Return Isol	кс	08-MOV/SOV	Aux Bidg	750	Open General Area	GG-57	х	X - (EC-75450, replace valve)		Various
1KC-53B	Aux Bldg Non-Essential Header Isolation	кс	08-MOV/SOV	Aux Bidg	750	Open General Area	KK-55	×			Various
1NC-32B	NC System Pressurizer PORV	NC	07-AOV	Rx Bldg		Przr Cavity		х	-		NC-Press, NC Inventory
1NC-34A	NC System Pressurizer PORV	NC	07-AQV	Rx Bidg		Przr Cavity		х			NC-Press, NC Inventory
1NDRD5060	1A ND pump dsch temp	ND	19-Temperature Sensor	Aux Bidg	750+9	732	LL-51				Containment Integrity
1NDRD5120	1B ND HtX dischargeTemperature to NC CL	ND	19-Temperature Sensor	Aux Bldg	750+9	733	LL-51				Containment Integrity
1ND-1B	RHR Pump Hotleg Suction Isolation	ND	08-MOV/SOV	Rx Bldg	745	B-C Lower Containment	Between B & C SG	х			DH
1ND-2AC	RHR Pump Hotleg Suction Isolation	ND	08-MOV/SOV	Rx Bldg	745	B-C VL Fan	B-C VL Fan Rm	×			DH
1ND-4B	RHR FWST Suction Isolation	ND	08-MOV/SOV	Aux Bldg	695	695 Pipechase	FF-53	x			DH, NC Inventory, Reactivity
1ND-15B	ND HtX Discharge X-tie Isol	ND	08-MOV/SOV	Aux Bidg	733+8	733	LL-52	х	X (EC-9997)		DH, NC Inventory, Reactivity
1ND-14	ND 1B HtX Discharge Flow Control	ND	07-AOV	Aux Bidg	733+6	733	LL-52	х	X (EC-77860)		DH, NC Inventory, Reactivity
1ND-29	ND 1A HtX Discharge Flow Control	ND	07-AOV	Aux Bidg	733+4	732	LL-52	х	X (EC-77860)		DH, NC Inventory, Reactivity
1NV-222B	UNIT 1 NV PUMP SUCTION FROM FWST ISOL	Ni	08-MOV/SOV	Aux Bidg	716+2	603	JJ-52	х			DH, NC Inventory, Reactivity
1NDHX0003	1A RHR HIX	ND	21-Tanks/HtXs	Aux Bidg	750	732	LL-52	х			DH, NC Inventory, Reactivity
1NDHX0004	18 RHR HIX	ND	21-Tanks/HtXs	Aux Bldg	750	733	LL-52	х			DH, NC Inventory, Reactivity

Equipment #	Description	System	Class of Equipment	Building	Elev.	Room#	Column- Grid	Listed on IPEEE List	Major Newi Replacement Equipment	Prior IPEEE Discrepancy/ Enhancement	Safety Function
1RNPU000 <u>8</u>	1B RN STRAINÉR BACKWASH PUMP	RN	05-Horizontal Pump	Aux Blog	716	601/RN Strainer Rm	BB-52		X - new (EC102478)		Various
1RNST0001	1A RN Pump Suction Strainer	RN	00-other	Aux Bldg	716	600/RN Strainer Rm	AA-50	×	X -replaced (MD102029, EC 99729)		Various
1RNST0002	1B RN Pump Suction Strainer	RN	00-other	Aux Bldg	716	601/RN Strainer Rm	AA-60	х	X -replaced (MD101864, EC 99729)		Various
1RN-21A	1A RN Strainer Auto Backwash Valve	RN	07-AOV	Aux Bldg	716+4	600/RN Strainer Rm	BB-52	×	X - new valve,actuator controls various ECs		Various
0RN-7Ą	1A/2A RN Pump SNSWP Suction Isol	RN	08-MOV/SQV	Aux Bldg	716+3	601	BB-63	х			Various
0RN-149A	1A/2A RN Essential Header SNSWP Return	RN	08-MOV/SOV	Aux Bldg	716+4	647W /Rathole	FF-59	х			Various
1SM-1AB	Main Steam Isolation Valve 1D SG	SM	07-AOV	Outer Doghouse	807+3	Outer Doghouse	FF-43	×	X -controls upgraded (NSM-12563)		NC pressure, Reactivity
1SM-3AB	Main Steam Isolation Valve 1C SG	SM	07-AOV	Inner Doghouse	767+30	Inner Doghouse	FF-53	х	X -controls upgraded (NSM-12563)		NC pressure, Reactivity
1SV-19	1A SG Main Steam PORV	SM	07-AOV	Outer Doghouse	807+3	Outer Doghouse	FF-43	×			NC pressure, Reactivity
1SV-13	1B SG Main Steam PORV	SM	07-AOV	Inner Doghouse	767+30	Inner Doghouse	FF-53	х		X -grating in contact w/valve	NC pressure, Reactivity
1VC-1A	VC Otsd Air Intake Isol from Unit 1	VC	08-MOV/SOV	Aux Bldg	767	926	BB-50	х			Various
1VI-AC-11	RN Strainer Backwash Assured Air Supply (2RN-21A)	VI	21-Tanks/HtXs	Aux Bidg	733	701C	CC-52		X - new component (EC-101543)		Various
1WL-322B	Containment Ventilation Otbrd CIV to VUCDT	WL	08-MOV/SOV	Aux Bldg	716+11	600/MDCAP Rm	CC-52	х			Containment Integrity
0VC-DO-0001 (CR- OAD-1)	Control Room Outside Press Fan Supply	VC	07-AOV	Aux Bidg	767	Control Rm Ventilation Rm	FF-56	x			Various
OVCFL0011 (CR- OAPFT-1)	Control Room Filter Package Fan A	vc	09-Fan	Aux Bldg	767	Control Rm Ventilation Rm	DD-54	×			Various
0YC-CH-0005 (CRA-C-1)	Control Room Area Chiller-1	VC/YC	11-Chiller	Aux Bidg	767	Control Rm Ventilation Rm	FF-56	х	X -controls upgrade (MD500739)		Various
0VCAH0001 (CRA-ÅHU-1)	A' TrainControl Room AHU-1	VC	10-AHU	Aux Bldg	767	Control Rm Ventilation Rm	EE-54	x			Various

Listed on Major New/ Prior IPEEE Class of Column-Description Equipment# System Building Elev. Room # IPEEE Replacement Safety Functio Discrepancyl Equipment Grid List Equipment X -replaced (NSM-12482/ EC75135) 1A EDG Battery Charger 16-Battery 1EPQ-BC-EDGA **EPQ** EDG Bldg 736.5 1A EDG Rn х Various (1EPQBCEDGA) Charger/Inverter 1EPQ-BA-EDGA 1A EDG Battery (1EPQBA024) **EPQ** 15-Battery Rack EDG Bldg 736.5 1A EDG Rm Various X -replaced (NSM-12482/ 1B EDG Battery Charger (1EPQBCEDGB) 16-Battery 1EPQ-BC-EDGB EDG Bldg 736.5 1B EDG Rm Various Charger/Inverter EC75135) X - missing 1EPQ-BA-EDGB 1B EDG Battery (1EPQBA024) 15-Battery Rack EDG Bldg 736.5 18 EDG Rm Various spacers Centers/Wall 1EPE-MX-EMXE 1DG1A 600 VAC MCC (1EMXE) EDG Bldg EDG 736.5 1A EDG Rm Various Mounted Contactors 03-Med Voltage Metal Clad SWGR EPC 1ETB 4.16 kV Essential Power for Aux Bldg 733 705 AA-50 Х Various 1ELX A 4.16 KV/600 VAC 1-EPE-TF-ELXA EPE 04-Transformer Aux Bldg 750 803 AA-50 X Various Transformer 1ELXC 4.16 KV/600 VAC 1-EPE-TF-ELXC EPE 04-Transformer Aux Bldg 750 803 AA-50 Various Transformer 1ELXB 4.16 KV/600 VAC EPE 1-EPE-TF-ELXB 04-Transformer 733 х Aux Bldg 705 AA-50 Various Transformer 01-Motor Contro Centers/Wall Mounted 1EMXA 600 VAC Essential MCC EPE Aux Bidg 750 808 FF-55 Х Various Contactors 01-Motor Control Centers/Wall 1EMXA-1 600 VAC Essential MCC EPE Aux Bidg 750 FF-55 х 808 Various Mounted Contactors 01-Motor Contro Centers/Wall X -contact 1EMXB 600 VAC Essential MCC EPE Aux Bldg 733 722 FF-55 х Various Mounted v/adjacent MCC Contactors X -contact v/adjacent MCC 1EMXB-1 600 VAC Essential MCC EPE Aux Bidg 722 FF-55 Various Contactors

Equipment #	Description	<u>System</u>	<u>Class of</u> Equipment	Bullding	Elev.	Room#	Column- Grid	Listed on IPEEE List	Major New/ Replacement Equipment	Prior IPEEE Discrepancy/ Enhancement	Safety Function
1-IPE-CA-9010	SSPS Cabinet 'A' Output & Logic cabinet	IPE	18-Instrument Rack	Control Complex	767	Control Rm	CC-54	х			Various
1-IPE-CA-9020	SSPS Cabinet 'B' Output & Logic cabinet	IPE	18-Instrument Rack	Control Complex	767	Control Rm	CC-54	х			Various
1EPG-BI-EVIA	Vital Battery Inverter	EPG	16-Battery Charger/Inverter	Control Complex	733	701	CC-56	Х	X - replaced (MG-12522)		Various
1EPG-BI-EVIB	Vital Battery Inverter	EPG	16-Battery Charger/Inverter	Control Complex	733	701	CC-56	×	X - replaced (MG-22522)		Various
1EPG-BI-EVIC	Vital Battery Inverter	EPG	16-Battery Charger/Inverter	Control Complex	733	701	CC-56	х	X - replaced (MG-22522)		Various
1EPG-BI-EVID	Vital Battery Inverter	EPG	16-Battery Charger/inverter	Control Complex	733	701	CC-56	х	X - replaced (MG-22522)		Various
1EVDA	Vital Panel 125VDC Breaker Panel	EPG	02-Low Voltage SWGR and Breaker Panels	Control Complex	733	701	CC-56	х			Various
1EVDB	Vital Panel 125VDC Breaker Panel	EPG	02-Low Voltage SWGR and Breaker Panels	Control Complex	733	701	CC-58	x			Various
1EVDC	Vital Panel 125VDC Breaker Panel	EPG	02-Low Voltage SWGR and Breaker Panels	Control Complex	733	701	CC-56	×			Various
1EVDD	Vital Panel 125VDC Breaker Panel	EPG	02-Low Voltage SWGR and Breaker Panels	Control Complex	733	701	CC-56	х			Various
EVDA	125VDC Distribution Center	EPL	14-Distribution Panels and Automatic Transfer Switches	Control Complex	733	701	CC-56	×		ĺ	Various
EVDB	125VDC Distribution Center	EPL	14-Distribution Panels and Automatic Transfer Switches	Control Complex	733	701	CC-56	х			Various
0-EPL-BA-EVCA	Vital Battery	EPL	15-Battery Rack	Control Complex	733	707	CC-56	x	X - replaced (NSM-52483 / EC-64766)		Various
0-EPL-BA-EVCB	Vital Battery	EPL	15-Battery Rack	Control Complex	733	708	CC-56	х	X - replaced (NSM-52484 / EC-65056)		Various
0-EPL-BC-EVCA	Vital Battery Charger	EPL	16-Battery Charger/Inverter	Control Complex	733	701	CC-54	х	X - replaced (NSM-52488 / EC-65972)		Various
0-EPL-BC-EVCB	Vital Battery Charger	EPL	18-Battery Charger/Inverter	Control Complex	733	701	CC-58	х	X - replaced (NSM-52489 / EC-66301)		Various

Rev. 1

ATTACHMENT 3 - McGuire Unit 1 SWEL-2 Base-2 List and Rapid Drain Down List

	Kapiu	וומוע	1 DOWN L					
	Unit 1 SWEL-2 "Base List"		:		:			
Equipment #	<u>Description</u>	System	Class of Equipment	Bldg	Elev.	Room #	Column- Grid	Function
1KFPU0001	1A KF Pump	KF	05-Horizontal Pump	Aux Bldg	750	816	PP-52	SFP Cooling
1KFPU0002	1B KF Pump	KF	05-Horizontal Pump	Aux Bldg	750	816	PP-52	SFP Cooling
1KFHX003	1A KF HtX	KF	21-Tanks/HtXs	Aux Bldg	750	816	PP-52	SFP Coolin
1KFHX004	1B KF HtX	KF	21-Tanks/HtXs	Aux Bldg	750	816	PP-52	SFP Coolin
1VAAH0030	1A KF Pump AHU	VA	10-AHU	Aux Bldg	750	816	PP-52	SFP Coolin
1VAAH0031	1B KF Pump AHU	VA	10-AHU	Aux Bldg	750	816	PP-52	SFP Coolin
1ETA-13	1A KF Pump Breaker	EPC	03-Med Voltage Metal Clad SWGR	Aux Bldg	750	803	AA-50	SFP Coolin
1ETB-13	1B KF Pump Breaker	EPC	03-Med Voltage Metal Clad SWGR	Aux Bldg	733	705	AA-50	SFP Coolin
1RN-140A	A KF Pump Ess AHU Sup Isol	RN	07-AOV	Aux Bldg	750	816	PP-52	SFP Coolir
1EMXA-F3D	1A KF Pump Motor AHU Motor	EPE	01-Motor Control Centers/Wall Mounted Contactors	Aux Bldg	750	808	FF-55	SFP Coolin
1EMXB-4C	1B KF Pump Motor AHU Motor	EPE	01-Motor Control Centers/Wall Mounted Contactors	Aux Bldg	750	722	FF-55	SFP Coolir
1RN-240B	1B KF Pump Ess AHU Sup Isol	RN	07-AOV	Aux Bldg	750	816	PP-52	SFP Coolir
	Unit 1 SWEL-2 "Rapid Draindown List"	I	· r	:	· .			
Equipment #	<u>Description</u>	System	Class of Equipment	Bldg	Elev.	Room#	Column- Grid	<u>Function</u>
1NV-842AC	SBMUP Suction Isolation	NV	08-MOV/SOV	Rx Bldg	725	Annulus	273°/61 R	SFP & Refuel Cavity Inventor
1NVAC0048	SBMUP Suction Pulsation Dampener (non-seismic SSC)	NV	00-Other- (pulsation dampener)	Rx Bldg	725	Annulus	320°/61 R	N∕A
1NVPU0046	SBMUP (non-seismic SSC)	N∨	05-Horizontal Pump	Rx Bldg	725	Annulus	320°/61 R	N/A
1NVAC0049	SBMUP Discharge Pulsation Dampener (non-seismic SSC)	N∨	00-Other- (pulsation dampener)	Rx Bldg	725	Annulus	320°/61 R	N/A
1NVFL0047	SBMUP Discharge Filter (non-seismic SSC)	NV	00 - Other	Rx Bldg	725	Annulus	320°/61 R	N/A
1NV-849AC	SBMUP Discharge Isolation	NV	08-MOV/SOV	Rx Bldg	725	Annulus	273°/61 R	N/A
Reactor Cavity Seal	Refueling Reactor Cavity Seal	FW	00 - Other	Rx Bldg	n/a	n/A	n/a	SFP & Refue Cavity Invent
FW-8, -10, -25, -26, -46, -47, -76, -75	Refuling Cavity Manual Drain Valves	FW	00 - Other	Rx Bldg	n/a	n/A	n/a	SFP & Refue Cavity Invent
uel Transfer Tube blind flange	Fuel Transfer Tube Blind Flange	KF	00 - Other	Rx Bldg	n/a	n/A	n/a	SFP & Refue Cavity Invent
Fuel Transfer Tube Weir Gate	Fuel Transfer Tube Weir Gate	KF	00 - Other	Rx Bldg	n/a	n/A	n/a	SFP & Refue Cavity Invent

ATTACHMENT 4

McGuire Unit 1 SWEL-2

Equipment #	<u>Description</u>	System	<u>Class of</u> <u>Equipment</u>	Bldg	Elev.	Room#	<u>Column-</u> <u>Grid</u>	Major New/ Replacement Equipment	Function
1NV-842AC	SBMUP Suction Isolation	NV	08-MOV/SOV	Rx Bldg	725	Annulus	273°/61 R	X - actuator replacement (EC-99992)	SFP & Refueling Cavity Inventory
1NVAC0048	SBMUP Suction Pulsation Dampener (non-seismic SSC)	NV	00-Other- (pulsation dampener)	Rx Bldg	725	Annulus	320°/61 R	X - replaced MGMM11916 (EC 37849)	N/A
1NVPU0046	SBMUP (non-seismic SSC)	NV	05-Horizontal Pump	Rx Bldg	725	Annulus	320°/61 R		N/A
1KFPU0001	1A KF Pump	KF	05-Horizontal Pump	Aux Bldg	750	816	PP-52	X - replaced motor EC105550	SFP Cooling
1KFPU0002	1B KF Pump	KF	05-Horizontal Pump	Aux Bldg	750	816	PP-52		SFP Cooling
1KFHX0003	1A KF HtX	KF	21-Tanks/HtXs	Aux Bldg	750	816	PP-52		SFP Cooling
1KFHX0004	1B KF HtX	KF	21-Tanks/HtXs	Aux Bldg	750	816	PP-52		SFP Cooling
1VAAH0031	18 KF Pump AHU	VA	10-AHU	Aux Bldg	750	816	QQ-52		SFP Cooling