Stevenson & Associates
Engineering Solutions for Nuclear Energy

Document No: 16C4405-RPT-002
Revision 0
December 15, 2016

50.54(f) NTTF 2.1 Seismic High Frequency Confirmation for WCGS

Prepared for:

Westinghouse Electric Company
1000 Westinghouse Drive
Pittsburgh, PA 16066, USA

Stevenson & Associates
1626 North Litchfield Road, Suite 170
Goodyear, AZ 85395

REVISION RECORD

Draft (Rev. D)		Date
Prepared by:	Hunter A. Young	12/15/2016
Reviewed by:	Samer El-Bahey	12/15/2016
Approved by:	Apostolos Karavoussianis	12/15/2016

Revision History

Rev. No.	Prepared by/ Date	Reviewed by/ Date	Approved by/ Date	Description of Revision

TABLE OF CONTENTS

TABLE OF TABLES

EXECUTIVE SUMMARY

The purpose of this report is to provide information as requested by the Nuclear Regulatory Commission (NRC) in its March 12, 2012 letter issued to all power reactor licensees and holders of construction permits in active or deferred status [1]. In particular, this report provides information requested to address the High Frequency Confirmation requirements of Item (4), Enclosure 1, Recommendation 2.1: Seismic, of the March 12, 2012 letter [1].

Following the accident at the Fukushima Dai-ichi nuclear power plant resulting from the March 11, 2011, Great Tohoku Earthquake and subsequent tsunami, the Nuclear Regulatory Commission (NRC) established a Near Term Task Force (NTTF) to conduct a systematic review of NRC processes and regulations and to determine if the agency should make additional improvements to its regulatory system. The NTTF developed a set of recommendations intended to clarify and strengthen the regulatory framework for protection against natural phenomena [2]. Subsequently, the NRC issued a 50.54(f) letter on March 12, 2012 [1], requesting information to assure that these recommendations are addressed by all U.S. nuclear power plants. The 50.54(f) letter requests that licensees and holders of construction permits under 10 CFR Part 50 reevaluate the seismic hazards at their sites against present-day NRC requirements and guidance. Included in the 50.54(f) letter was a request that licensees perform a "confirmation, if necessary, that SSCs, which may be affected by high-frequency ground motion, will maintain their functions important to safety."

EPRI 1025287, "Seismic Evaluation Guidance: Screening, Prioritization and Implementation Details (SPID) for the resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic" [3] provided screening, prioritization, and implementation details to the U.S. nuclear utility industry for responding to the NRC 50.54(f) letter. This report was developed with NRC participation and was subsequently endorsed by the NRC. The SPID included guidance for determining which plants should perform a High Frequency Confirmation and identified the types of components that should be evaluated in the evaluation.

Subsequent guidance for performing a High Frequency Confirmation was provided in EPRI 3002004396, "High Frequency Program, Application Guidance for Functional Confirmation and Fragility Evaluation," [4] and was endorsed by the NRC in a letter dated September 17, 2015 [5]. Final screening identifying plants needing to perform a High Frequency Confirmation was provided by NRC in a letter dated October 27, 2015 [6].

This report describes the High Frequency Confirmation evaluation undertaken for Wolf Creek Generating Station (WCGS). The objective of this report is to provide summary information describing the High Frequency Confirmation evaluations and results. The level of detail provided in the report is intended to enable NRC to understand the inputs used, the evaluations performed, and the decisions made as a result of the evaluations.

EPRI 3002004396 [4] is used for the Wolf Creek Generating Station engineering evaluations described in this report. In accordance with Reference [4], the following topics are addressed in the subsequent sections of this report:

- Process of selecting components and a list of specific components for high-frequency confirmation
- Estimation of a vertical ground motion response spectrum (GMRS)
- Estimation of in-cabinet seismic demand for subject components
- Estimation of in-cabinet seismic capacity for subject components
- Summary of subject components' high-frequency evaluations

1 INTRODUCTION

1.1 Purpose

The purpose of this report is to provide information as requested by the NRC in its March 12, 2012 50.54(f) letter issued to all power reactor licensees and holders of construction permits in active or deferred status [1]. In particular, this report provides requested information to address the High Frequency Confirmation requirements of Item (4), Enclosure 1, Recommendation 2.1: Seismic, of the March 12, 2012 letter [1].

1.2 Background

Following the accident at the Fukushima Dai-ichi nuclear power plant resulting from the March 11, 2011, Great Tohoku Earthquake and subsequent tsunami, the Nuclear Regulatory Commission (NRC) established a Near Term Task Force (NTTF) to conduct a systematic review of NRC processes and regulations and to determine if the agency should make additional improvements to its regulatory system. The NTTF developed a set of recommendations intended to clarify and strengthen the regulatory framework for protection against natural phenomena [2]. Subsequently, the NRC issued a 50.54(f) letter on March 12, 2012 [1], requesting information to assure that these recommendations are addressed by all U.S. nuclear power plants. The 50.54(f) letter requests that licensees and holders of construction permits under 10 CFR Part 50 reevaluate the seismic hazards at their sites against present-day NRC requirements and guidance. Included in the 50.54(f) letter was a request that licensees perform a "confirmation, if necessary, that SSCs, which may be affected by high-frequency ground motion, will maintain their functions important to safety."

EPRI 1025287, "Seismic Evaluation Guidance: Screening, Prioritization and Implementation Details (SPID) for the resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic" [3] provided screening, prioritization, and implementation details to the U.S. nuclear utility industry for responding to the NRC 50.54(f) letter. This report was developed with NRC participation and is endorsed by the NRC. The SPID included guidance for determining which plants should perform a High Frequency Confirmation and identified the types of components that should be evaluated in the evaluation.

Subsequent guidance for performing a High Frequency Confirmation was provided in EPRI 3002004396, "High Frequency Program, Application Guidance for Functional Confirmation and Fragility Evaluation," [4] and was endorsed by the NRC in a letter dated September 17, 2015 [5]. Final screening identifying plants needing to perform a High Frequency Confirmation was provided by NRC in a letter dated October 27, 2015 [6].

On March 31, 2014, Wolf Creek Generating Station submitted a reevaluated seismic hazard to the NRC as a part of the Seismic Hazard and Screening Report [7]. By letter dated October 27, 2015 [6], the NRC transmitted the results of the screening and prioritization review of the seismic hazards reevaluation.

This report describes the High Frequency Confirmation evaluation undertaken for Wolf Creek Generating Station using the methodologies in EPRI 3002004396, "High Frequency Program,

Application Guidance for Functional Confirmation and Fragility Evaluation," as endorsed by the NRC in a letter dated September 17, 2015 [5].

The objective of this report is to provide summary information describing the High Frequency Confirmation evaluations and results. The level of detail provided in the report is intended to enable NRC to understand the inputs used, the evaluations performed, and the decisions made as a result of the evaluations.

1.3 Approach

EPRI 3002004396 [4] is used for the Wolf Creek Generating Station engineering evaluations described in this report. Section 4.1 of Reference [4] provided general steps to follow for the high frequency confirmation component evaluation. Accordingly, the following topics are addressed in the subsequent sections of this report:

- WCGS's SSE and GMRS Information
- Selection of components and a list of specific components for high-frequency confirmation
- Estimation of seismic demand for subject components
- Estimation of seismic capacity for subject components
- Summary of subject components' high-frequency evaluations
- Summary of Results

1.4 Plant Screening

Wolf Creek Generating Station submitted reevaluated seismic hazard information including GMRS and seismic hazard information to the NRC on March 31, 2014 [7]. In a letter dated August 12, 2015, the NRC staff concluded that the submitted GMRS adequately characterizes the reevaluated seismic hazard for the Wolf Creek Generating Station [8].

The NRC final screening determination letter [6] concluded that the Wolf Creek Generating Station GMRS to SSE comparison resulted in a need to perform a High Frequency Confirmation in accordance with the screening criteria in the SPID [3].

2 SELECTION OF COMPONENTS FOR HIGH-FREQUENCY SCREENING

The fundamental objective of the high frequency confirmation review is to determine whether the occurrence of a seismic event could cause credited equipment to fail to perform as necessary. An optimized evaluation process is applied that focuses on achieving a safe and stable plant state following a seismic event. As described in Reference [4], this state is achieved by confirming that key plant safety functions critical to immediate plant safety are preserved (reactor trip, reactor vessel inventory and pressure control, and core cooling) and that the plant operators have the necessary power available to achieve and maintain this state immediately following the seismic event (AC/DC power support systems).

Within the applicable functions, the components that would need a high frequency confirmation are contact control devices subject to intermittent states in seal-in or lockout (SILO) circuits. Accordingly, the objective of the review as stated in Section 4.2.1 of Reference [4] is to determine if seismic induced high frequency relay chatter would prevent the completion of the key functions listed in the subsequent subsections.*

Due to relevant contact device mapping as part of the recent WCGS Seismic Probabilistic Risk Assessment (SPRA), all devices controlling the equipment and components covered by the high frequency program were selected using the device/component dependency matrix (table) in the SPRA Relay Database contained in calculation 13C4152-CAL-009 [9]. This method produces a superset of contact devices containing both those devices covered by the high frequency program, and those devices which would screen out functionally from the program because they are not SILO candidates. This is a conservative approach to the device list.

2.1 Reactor Trip/SCRAM

The reactor trip/SCRAM function is identified as a key function in Reference [4] to be considered in the High Frequency Confirmation. The same report also states that, *"the design requirements preclude the application of seal-in or lockout circuits that prevent reactor trip/SCRAM functions"* and that *"No high-frequency review of the reactor trip/SCRAM systems is necessary."*

2.2 Reactor Vessel Inventory Control

The concern for this category of the EPRI 3002004396 [4] program is the actuation of valves that have the potential to cause a loss-of-coolant accident (LOCA). A LOCA following a seismic event could provide a challenge to the mitigation strategies and lead to core damage. The contact devices identified in the SPRA Relay Database from Reference [9] as controlling the Pressurizer Power Operated Relief Valves (PORVs) as well as other *included*† Reactor Coolant System (RCS) valves in Table 2-1 were selected for high frequency program screening.

---

* The selection of components for high frequency screening was performed by report 16C4405-RPT-001 [12] and is summarized herein.

† Unless otherwise noted, these are the valves tagged as either "Yes" or "Potentially" in the "To be Evaluated" field.

Selection of Valves

The process and criteria for assessing potential reactor coolant leak-path valves is to review all P&IDs attached to the Reactor Coolant System (RCS) and include all active[‡] isolation valves and any active second valve upstream or downstream that is assumed to be required to be closed during normal operation or close upon an initiating event (LOCA or Seismic). Manual valves that are normally closed are assumed to remain closed and a second simple check valve[§] is assumed to function and not be a Multiple Spurious Failure. Instrument lines that are 1 inch in diameter or less are presumed to have restricting orifices that are designed to mitigate any leakage due to make up, and thus are not analyzed.

Table 2-1: Potential Reactor Coolant Leak Path Valves

Component	Description	Comment
BB8010A	Pressurizer Safety Relief Valve	
BB8010B	Pressurizer Safety Relief Valve	
BB8010C	Pressurizer Safety Relief Valve	
BBHV8000A	PORV Block Valve	
BBHV8000B	PORV Block Valve	
BBHV8032	Reactor Vessel Flange Leakoff Valve	HV Valve
BBPCV0455A	Pressurizer Power Operated Relief Valve	Normally would only be a potential Leak Path HV8000A fails to be closed
BBPCV0456A	Pressurizer Power Operated Relief Valve	Normally would only be a potential Leak Path HV8000B fails to be closed
BBPV8702A	RCS Hot Leg 1 to RHR Pump A Suction	PV Valve
BBPV8702B	RCS Hot Leg 4 to RHR Pump B Suction	PV Valve
BGHV8153A	Excess Letdown Isolation	Potentially -- Normally would only be a potential Leak Path HV8154A fails to be closed
BGHV8153B	Excess Letdown Isolation	Potentially -- Normally would only be a potential Leak Path HV8153A fails to be closed
BGHV8154A	Excess Letdown Isolation	
BGHV8154B	Excess Letdown Isolation - D Loop	
BGLCV0459	RCS Letdown to Regenerative Heat Exchanger	Normally would only be a potential Leak Path LCV0460 fails to be closed

[‡] *Active*: A component in which mechanical movement or change of state must occur to accomplish the function of the component.

[§] *Simple Check Valve*: A valve which closes upon reverse fluid flow only.

Table 2-1: Potential Reactor Coolant Leak Path Valves		
Component	**Description**	**Comment**
BGLCV0460	RCS Letdown to Regenerative Heat Exchanger	
EJHV8701A	RCS Hot Leg 1 to RHR Pump A Suction	Normally would only be a potential Leak Path if PV8702A fails to be closed
EJHV8701B	RCS Hot Leg 4 to RHR Pump B Suction	Normally would only be a potential Leak Path if PV8702B fails to be closed
SJHV0005	RCS Liquid Sample Inner Containment Isolation Valve	Normally would only be a potential Leak Path if HV0006 and HV0027 fails to be closed
SJHV0006	RCS Liquid Sample Outer Containment Isolation Valve	
SJHV0127	RCS Liquid Sample Outer Containment Isolation Bypass Valve	This is a Normally closed Valve
SJHV0128	Pressurizer/RCS Liquid Sample Inner Containment Isolation Valve	Normally would only be a potential Leak Path if HV0129 and HV0130 fails to be closed
SJHV0129	Pressurizer/RCS Liquid Sample Outer Containment Isolation Valve	This is a Normally closed Valve
SJHV0130	Pressurizer/RCS Liquid Sample Outer Containment Isolation Bypass Valve	This is a Normally closed Valve

2.3 Reactor Vessel Pressure Control

The reactor vessel pressure control function is identified as a key function in Reference [4] to be considered in the High Frequency Confirmation. The same report also states that "*required post event pressure control is typically provided by passive devices*" and that "*no specific high frequency component chatter review is required for this function.*"

2.4 Core Cooling

EPRI 3002004396 [4] requires confirmation that one train of AC-independent cooling is not challenged by a SILO device. The steam turbine-driven auxiliary feedwater (TDAFW) pump was the train chosen for this analysis. TDAFW pump PAL02 is controlled indirectly via valves in the steam supply lines feeding the turbine, and thus the selection of components for core cooling is limited to the valves associated with the turbine steam supply, pump suction, and pump discharge. Table 2-2 is the list of valves associated with the TDAFW system. The contact devices identified in the SPRA Relay Database from Reference [9] as controlling these valves were selected for high frequency program screening.

Table 2-2: Core Cooling Components		
Component	**Description**	**Function**
ABHV0005	Main Steam Loop 2 to TDAFW Pump	Valve needs to open to provide steam to turbine
ABHV0006	Main Steam Loop 3 to TDAFW Pump	Valve needs to open to provide steam to turbine
ABPV0001	Steam Generator A Atmospheric Relief Valve	Valve needs to remain open (throttled) to discharge steam
ABPV0002	Steam Generator B Atmospheric Relief Valve	Valve needs to remain open (throttled) to discharge steam
ABPV0003	Steam Generator C Atmospheric Relief Valve	Valve needs to remain open (throttled) to discharge steam
ABPV0004	Steam Generator D Atmospheric Relief Valve	Valve needs to remain open (throttled) to discharge steam
ALHV0006	TDAFW Pump Discharge to Steam Generator D	Valve needs to remain open (throttled) to maintain pump discharge to SG
ALHV0008	TDAFW Pump Discharge to Steam Generator A	Valve needs to remain open (throttled) to maintain pump discharge to SG
ALHV0010	TDAFW Pump Discharge to Steam Generator B	Valve needs to remain open (throttled) to maintain pump discharge to SG
ALHV0012	TDAFW Pump Discharge to Steam Generator C	Valve needs to remain open (throttled) to maintain pump discharge to SG
ALHV0036	Condensate Storage to TDAFW Pump 10" Gate Valve	Valve needs to remain open to maintain pump suction from CST
FCFV0313	TDAFW Pump Turbine Speed Governing Valve	Valve needs to regulate steam flow to turbine
FCHV0312	TDAFW Pump Turbine Mechanical Trip/Throttle Valve	Valve needs to remain open and un-tripped to provide steam to turbine

2.5 AC/DC Power Support Systems

The AC and DC power support systems were reviewed for contact control devices in seal-in and lockout circuits that prevent the availability of DC and AC power sources. The following AC and DC power support systems were reviewed:

- Emergency Diesel Generators,
- Battery Chargers and Inverters,
- Diesel Generator Ancillary Systems, and
- Switchgear, Load Centers, and MCCs.

Electrical power, especially DC, is necessary to support achieving and maintaining a stable plant condition following a seismic event. DC power relies on the availability of AC power to recharge the batteries. The availability of AC power is dependent upon the Diesel Generators (DGs) and their ancillary support systems. EPRI 3002004396 [4] requires confirmation that the supply of emergency power is not challenged by a SILO device. The tripping of lockout devices or circuit breakers is expected to require some level of diagnosis to determine if the trip was spurious due to contact chatter or in response to an actual system fault. The actions taken to diagnose the fault condition could substantially delay the restoration of emergency power.

To ensure contact chatter cannot compromise the emergency power system, contact control devices identified in the SPRA Relay Database from Reference [9] as controlling the DGs, Battery Chargers, Vital AC Inverters, and Switchgear/Load Centers/MCCs as necessary to distribute power from the DGs to the Battery Chargers and EDG Ancillary Systems were selected for high frequency program screening. Wolf Creek has two (2) DGs which provide emergency power for their two (2) divisions of Class 1E loads, with one DG for each division [10, pp. 8.3-5, 8.3-10]. Four (4) battery chargers provide DC power and battery recharging functions [10, pp. 8.3-37]. These components are listed in Table 2-3.

In response to bus under-voltage relaying detecting the LOOP, the Class 1E control systems must automatically shed loads, start the DGs, and sequentially load the diesel generators as designed. Ancillary systems required for DG operation as well as Class 1E battery chargers and inverters must function as necessary. The goal of this analysis is to identify any vulnerable contact devices that could chatter during the seismic event, seal-in or lock-out, and prevent these systems from performing their intended safety-related function of supplying electrical power during the LOOP.

Diesel Generators

The contact devices identified in the SPRA Relay Database from Reference [9] as controlling the diesel engine as well as protective relaying for the generator and its output circuit breaker were selected for high frequency program screening.

Battery Chargers

The protective relaying identified in the SPRA Relay Database from Reference [9] as controlling the low-voltage AC circuit breakers supplying 480V AC power to the battery chargers, as well as the breakers themselves, were selected for high frequency program screening. Analysis of schematics for the battery chargers revealed no SILO contact devices and thus no contact devices controlling the chargers themselves are selected for analysis.

Inverters

Analysis of schematics for the inverters revealed no SILO contact devices and thus no contact devices controlling the inverters are selected for analysis.

DG Ancillary Systems

The Diesel Generators require several components and systems to start and operate. When identifying electrical contact devices, only systems and components which are electrically controlled are analyzed.

Starting Air

Based on Diesel Generator availability as an initial condition the passive air reservoirs are presumed pressurized and the only active components in this system required to operate are the air start solenoids, which are covered under the DG engine control analysis above.

Combustion Air Intake and Exhaust

The combustion air intake and exhaust for the Diesel Generators are passive systems, which do not rely on electrical control.

Lube Oil

The Diesel Generators utilize engine-driven mechanical lubrication oil pumps which do not rely on electrical control.

Fuel Oil

The Diesel Generators utilize engine-driven mechanical pumps and DC-powered booster pumps to supply fuel oil to the engines from the day tanks. The day tanks are re-supplied using AC-powered Diesel Oil Transfer Pumps which are identified in Table 2-3. Relaying identified in the SPRA Relay Database from Reference [9] as controlling the transfer pumps have been selected for evaluation.

Cooling Water

The Diesel Generator Cooling Water System consists of three cooling loops, jacket water, intercooler, and Essential Service Water (ESW). Engine driven pumps are credited for the jacket water and intercooler when the engine is operating. These mechanical pumps do not rely on electrical control. The ESW pumps, valves, screens, and strainers required to provide cooling water to the diesel generator heat exchangers are indicated in Table 2-3. The contact devices identified in the SPRA Relay Database from Reference [9] as controlling these components were selected for high frequency program screening.

Ventilation

The fans and dampers necessary to provide ventilation to the Diesel Generator Building are indicated in Table 2-3. The contact devices identified in the SPRA Relay Database from Reference [9] as controlling these components were selected for high frequency program screening.

Switchgear, Load Centers, and MCCs

Power distribution from the DGs to the necessary electrical loads (Battery Chargers, Inverters, ESW components, Fuel Oil Pumps, and DG Ventilation Fans) was traced to identify power distribution components and their associated protective relaying included in this analysis.

The main (152NB00112, 152NB00212) and alternate (152NB00109, 152NB00209) power feed circuit breakers for the class 1E 4160V AC switchgear are not included in this analysis as the diesel generator is the preferred source of electrical power since offsite power cannot be assured following the seismic event. Based on initial conditions prior to the seismic event, normal power is being fed to these busses, which means 152NB00112 and 152NB00212 are closed, and 152NB00109 and 152NB00209 are tripped. Contact devices in the undervoltage and load shed circuits are included in the selection due to the dependence of the diesel generator breaker on these function. Evaluation of these contact devices ensures that proper signaling to these breakers is not compromised in the seismic event. Auxiliary contacts from these breakers are permissives to close the diesel generator breakers 152NB00111 and 152NB0021. Chatter in the auxiliary contacts of 152NB00112, 152NB00212, 152NB00109, or 152NB00209 may delay

closure of the diesel generator circuit breaker, however breaker closure capability would be restored once strong shaking subsides. Improper DG loading due to a double failure of the main feed breaker to trip while falsely indicating (via its auxiliary contacts) it has tripped is not considered in this analysis due to the unlikely nature of this specific chain of events. The main and auxiliary feed breaker closing circuits are controlled by hand switches only. These normally-open rugged hand switches prevent spurious breaker closure. Based on this analysis, circuit breakers 152NB00112, 152NB00212, 152NB00109, and 152NB00209 do not meet the selection criteria.

Medium- and Low-Voltage AC Distribution

The medium- and low-voltage circuit breakers in 4160V and 480V AC Switchgear supplying power to loads identified in this section (battery chargers, DG ancillary systems, etc.) have been identified in Table 2-3 for evaluation. In addition to the protective relaying identified in the SPRA Relay Database from Reference [9] as controlling these circuit breakers, the circuit breakers themselves were selected for high frequency program screening as well.

Table 2-3: Electrical Power Components

Component	Description	Function
152NB00110	XNG03 Primary Circuit Breaker	Feeds Electrical Power to Transformer
152NB00111	DG01 Circuit Breaker	Feeds Electrical Power to MV Switchgear
152NB00113	XNG01 Primary Circuit Breaker	Feeds Electrical Power to Transformer
152NB00115	Essential Service Water Pump A Circuit Breaker	Feeds Electrical Power to Pump
152NB00116	XNG05 Primary Circuit Breaker	Feeds Electrical Power to Transformer
152NB00210	XNG04 Primary Circuit Breaker	Feeds Electrical Power to Transformer
152NB00211	DG02 Circuit Breaker	Feeds Electrical Power to MV Switchgear
152NB00213	XNG02 Primary Circuit Breaker	Feeds Electrical Power to Transformer
152NB00215	Essential Service Water Pump B Circuit Breaker	Feeds Electrical Power to Pump
152NB00216	XNG06 Primary Circuit Breaker	Feeds Electrical Power to Transformer
52NG00101	XNG01 Secondary Circuit Breaker	Feeds Electrical Power to LV Switchgear
52NG00103	NK021 Feeder Circuit Breaker	Feeds Electrical Power to Battery Charger
52NG00106	NG001A Feeder Circuit Breaker	Feeds Electrical Power to MCC
52NG00201	XNG02 Secondary Circuit Breaker	Feeds Electrical Power to LV Switchgear
52NG00203	NK024 Feeder Circuit Breaker	Feeds Electrical Power to Battery Charger
52NG00206	NG002A Feeder Circuit Breaker	Feeds Electrical Power to MCC
52NG00301	XNG03 Secondary Circuit Breaker	Feeds Electrical Power to LV Switchgear
52NG00303	NK023 Feeder Circuit Breaker	Feeds Electrical Power to Battery Charger
52NG00307	NG003D Feeder Circuit Breaker	Feeds Electrical Power to MCC
52NG00401	XNG03 Secondary Circuit Breaker	Feeds Electrical Power to LV

Table 2-3: Electrical Power Components		
Component	**Description**	**Function**
		Switchgear
52NG00403	NK022 Feeder Circuit Breaker	Feeds Electrical Power to Battery Charger
52NG00407	NG004D Feeder Circuit Breaker	Feeds Electrical Power to MCC
52NG005EAF1	XNG05 Secondary Circuit Breaker	Feeds Electrical Power to MCC
52NG006EAF1	XNG06 Secondary Circuit Breaker	Feeds Electrical Power to MCC
CGM01A	DG01 Ventilation Supply Fan	Provides Room Ventilation for Diesel Generator
CGM01B	DG02 Ventilation Supply Fan	Provides Room Ventilation for Diesel Generator
EFHV0037	ESW to UHS Isolation Valve	Throttled valve needs to open for DG Cooling
EFHV0038	ESW to UHS Isolation Valve	Throttled valve needs to open for DG Cooling
EFHV0091	Screen Wash Water Valve	Valve needs to operate to support DG Cooling
EFHV0092	Screen Wash Water Valve	Valve needs to operate to support DG Cooling
EFPDV0019	Self-Cleaning Strainer Trash Valve	Valve needs to operate to support DG Cooling
EFPDV0020	Self-Cleaning Strainer Trash Valve	Valve needs to operate to support DG Cooling
FEF01A	Travelling Screen	Screen needs to operate for DG Cooling
FEF01B	Travelling Screen	Screen needs to operate for DG Cooling
FEF02A	Self-Cleaning Strainer	Strainer needs to operate for DG Cooling
FEF02B	Self-Cleaning Strainer	Strainer needs to operate for DG Cooling
GMHZ0009	DG Room Ventilation Exhaust Damper	Damper needs to open to support DG Ventilation
GMHZ0019	DG Room Ventilation Exhaust Damper	Damper needs to open to support DG Ventilation
GMTZ0001A	DG Room Ventilation Supply Damper	Damper needs to open to support DG Ventilation
GMTZ0011A	DG Room Ventilation Supply Damper	Damper needs to open to support DG Ventilation
KKJ01A	Diesel Engine	Provides Emergency Motive Power
KKJ01B	Diesel Engine	Provides Emergency Motive Power
NE001	Generator	Converts Mechanical Power to Electrical
NE002	Generator	Converts Mechanical Power to Electrical
PEF01A	Essential Service Water Pump A	Provides Cooling for Diesel Generator
PEF01B	Essential Service Water Pump B	Provides Cooling for Diesel Generator
PJE01A	Fuel Oil Transfer Pump A	Provides Fuel for Diesel Generator
PJE01B	Fuel Oil Transfer Pump B	Provides Fuel for Diesel Generator

Table 2-3: Electrical Power Components		
Component	**Description**	**Function**
XNG01	4160V to 480V Step Down Transformer	Converts 4160V AC Electrical Power to 480V AC
XNG02	4160V to 480V Step Down Transformer	Converts 4160V AC Electrical Power to 480V AC
XNG03	4160V to 480V Step Down Transformer	Converts 4160V AC Electrical Power to 480V AC
XNG04	4160V to 480V Step Down Transformer	Converts 4160V AC Electrical Power to 480V AC
XNG05	4160V to 480V Step Down Transformer	Converts 4160V AC Electrical Power to 480V AC
XNG06	4160V to 480V Step Down Transformer	Converts 4160V AC Electrical Power to 480V AC

480V AC MCCs, 120V AC, 250 VDC, and 125V DC Distribution

The 480V MCCs, and the 120V AC, 250 VDC, and 125V DC Distribution all use either Molded-Case Circuit Breakers [10, pp. 8.3-9] or fused disconnect switches, both of which are seismically rugged [11]. For this reason, these devices are not included in the device table. Contactors, and auxiliary and protective relays within the MCCs are covered under the components they control.

2.6 Summary of Selected Components

The investigation of high-frequency contact devices as described above was performed in Ref. [12]. A list of the contact devices requiring a high frequency confirmation is provided in Appendix B, Table B-1.

3 SEISMIC EVALUATION**

3.1 Horizontal Seismic Demand

Per Reference [4], Section 4.3, the basis for calculating high-frequency seismic demand on the subject components in the horizontal direction is the Wolf Creek Generating Station horizontal ground motion response spectrum (GMRS), which was generated as part of the WCGS Seismic Hazard and Screening Report [7] submitted to the NRC on March 31, 2014, and accepted by the NRC on August 12, 2015 [8].

It is noted in Reference [4] that a Foundation Input Response Spectrum (FIRS) may be necessary to evaluate buildings whose foundations are supported at elevations different than the Control Point elevation. However, for sites founded on rock, per Reference [4], "The Control Point GMRS developed for these rock sites are typically appropriate for all rock-founded structures and additional FIRS estimates are not deemed necessary for the high frequency confirmation effort." For sites founded on soil, the soil layers will shift the frequency range of seismic input towards the lower frequency range of the response spectrum by engineering judgment. Therefore, for purposes of high-frequency evaluations in this report, the GMRS is an adequate substitute for the FIRS for sites founded on soil.

The applicable buildings at WCGS are founded on soil and have only the Control Point GMRS defined; therefore, the Control Point GMRS is conservatively used as the input at the building foundation.

The horizontal GMRS values are provided in Table 3-2.

3.2 Vertical Seismic Demand

As described in Section 3.2 of Reference [4], the horizontal GMRS and site soil conditions are used to calculate the vertical GMRS (VGMRS), which is the basis for calculating high-frequency seismic demand on the subject components in the vertical direction.

The site's soil mean shear wave velocity vs. depth profile is provided in Reference [7], Table 2.3.2-2 and reproduced below in Table 3-1.

** The high frequency screening was performed by report 16C4405-CAL-001 [16] and is summarized herein.

Table 3-1: Soil Mean Shear Wave Velocity vs. Depth Profile						
Layer	**Depth (ft)**	**Thickness, t_i (ft)**	**Vs_i (ft/s)**	**t_i / Vs_i**	**$\Sigma [t_i / Vs_i]$**	**Vs30 (ft/s)**
1	5.0	5.0	550	0.0091	0.0091	
2	10.0	5.0	550	0.0091	0.0182	
3	15.0	5.0	1,450	0.0034	0.0216	
4	20.0	5.0	1,450	0.0034	0.0251	
5	25.0	5.0	1,450	0.0034	0.0285	
6	30.0	5.0	1,450	0.0034	0.0320	
7	36.0	6.0	1,450	0.0041	0.0361	
8	42.0	6.0	6,200	0.0010	0.0371	
9	48.0	6.0	6,200	0.0010	0.0380	
10	54.0	6.0	3,500	0.0017	0.0398	1983
11	60.0	6.0	3,500	0.0017	0.0415	
12	64.0	4.0	3,500	0.0011	0.0426	
13	70.0	6.0	6,200	0.0010	0.0436	
14	76.0	6.0	6,200	0.0010	0.0446	
15	82.0	6.0	6,200	0.0010	0.0455	
16	85.0	3.0	4,000	0.0008	0.0463	
17	98.4	13.4	4,000	0.0034	0.0496	

Using the shear wave velocity vs. depth profile, the velocity of a shear wave traveling from a depth of 30m (98.4ft) to the surface of the site (Vs30) is calculated per the methodology of Reference [4], Section 3.5.

- The time for a shear wave to travel through each soil layer is calculated by dividing the layer depth (di) by the shear wave velocity of the layer (Vsi).
- The total time for a wave to travel from a depth of 30m to the surface is calculated by adding the travel time through each layer from depths of 0m to 30m (Σ[di/Vsi]).
- The velocity of a shear wave traveling from a depth of 30m to the surface is therefore the total distance (30m) divided by the total time;
  i.e., Vs30 = (30m)/Σ[di/Vsi].

The site's soil class is determined by using the site's shear wave velocity (Vs30) and the peak ground acceleration (PGA) of the GMRS and comparing them to the values within Reference [4], Table 3-1. Based on the PGA of 0.288g and the shear wave velocity of 1983ft/s, the site soil class is A-Hard.

Once a site soil class is determined, the mean vertical vs. horizontal GMRS ratios (V/H) at each frequency are determined by using the site soil class and its associated V/H values in Reference [4], Table 3-2.

The vertical GMRS is then calculated by multiplying the mean V/H ratio at each frequency by the horizontal GMRS acceleration at the corresponding frequency. It is noted that Reference [4], Table 3-2 values are constant between 0.1Hz and 15Hz.

The V/H ratios and VGMRS values are provided in Table 3-2 of this report.

Figure 3-1 below provides a plot of the horizontal GMRS, V/H ratios, and vertical GMRS for WCGS.

Table 3-2: Horizontal and Vertical Ground Motions Response Spectra

Frequency (Hz)	HGMRS (g)	V/H Ratio	VGMRS (g)
100	0.288	0.78	0.225
90	0.290	0.81	0.235
80	0.294	0.85	0.250
70	0.301	0.89	0.268
60	0.313	0.90	0.282
50	0.341	0.88	0.300
40	0.383	0.84	0.322
35	0.417	0.79	0.329
30	0.460	0.74	0.340
25	0.526	0.69	0.363
20	0.589	0.67	0.395
15	0.683	0.67	0.458
12.5	0.727	0.67	0.487
10	0.706	0.67	0.473
9	0.674	0.67	0.452
8	0.628	0.67	0.421
7	0.579	0.67	0.388
6	0.505	0.67	0.338
5	0.438	0.67	0.293
4	0.329	0.67	0.220
3.5	0.265	0.67	0.178
3	0.214	0.67	0.143
2.5	0.171	0.67	0.115
2	0.160	0.67	0.107
1.5	0.134	0.67	0.090
1.25	0.119	0.67	0.080
1	0.095	0.67	0.064
0.9	0.087	0.67	0.059
0.8	0.081	0.67	0.054
0.7	0.075	0.67	0.050
0.6	0.069	0.67	0.046
0.5	0.064	0.67	0.043
0.4	0.052	0.67	0.035
0.35	0.045	0.67	0.030
0.3	0.039	0.67	0.026
0.25	0.032	0.67	0.022
0.2	0.026	0.67	0.017
0.15	0.019	0.67	0.013
0.125	0.016	0.67	0.011
0.1	0.013	0.67	0.009

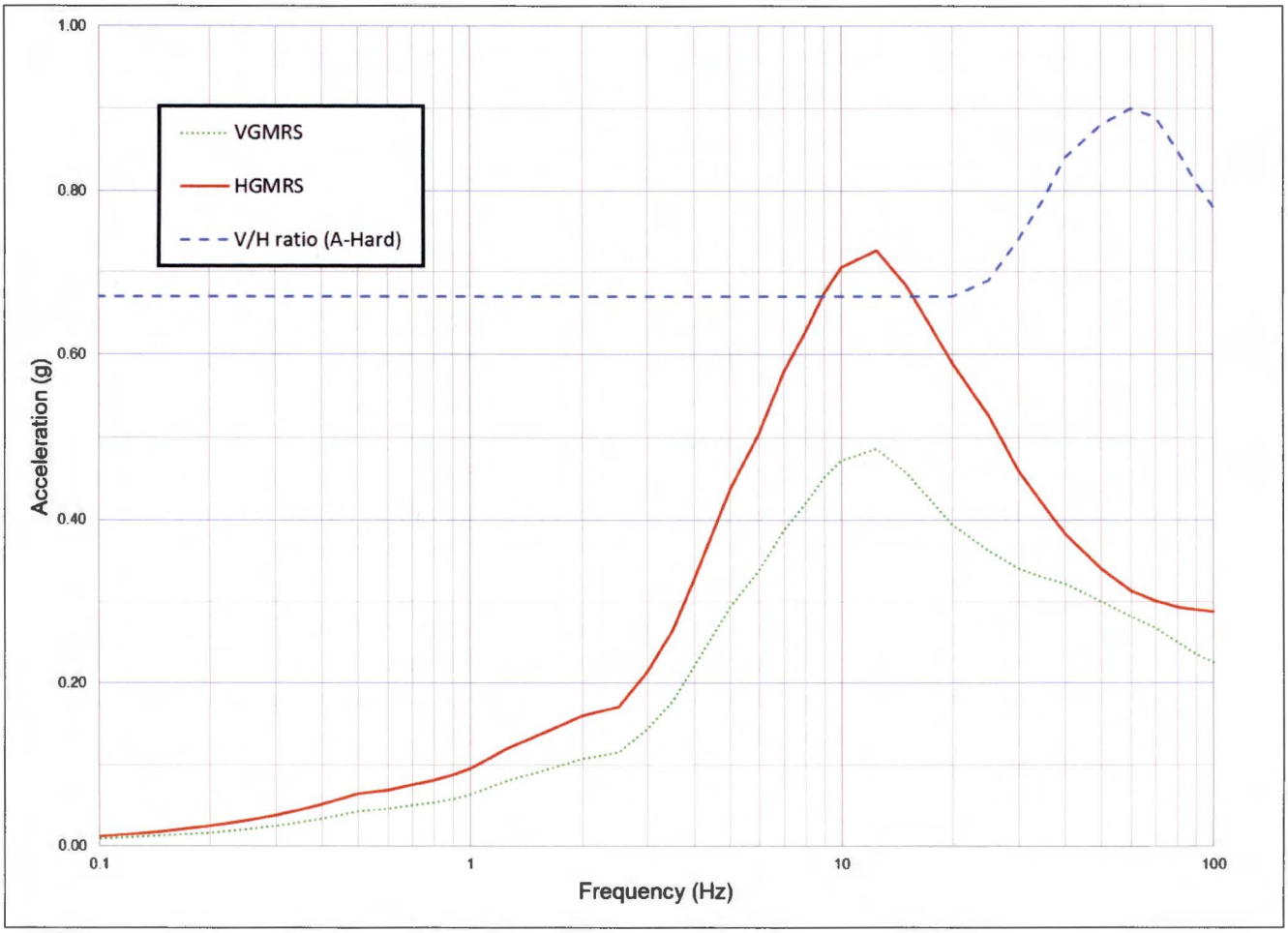

Figure 3-1: Plot of the Horizontal and Vertical Ground Motions Response Spectra and V/H Ratios

3.3 Component Horizontal Seismic Demand

Per Reference [4] the peak horizontal acceleration is amplified using the following two factors to determine the horizontal in-cabinet response spectrum:

- Horizontal in-structure amplification factor AF_{SH} to account for seismic amplification at floor elevations above the host building's foundation
- Horizontal in-cabinet amplification factor AF_c to account for seismic amplification within the host equipment (cabinet, switchgear, motor control center, etc.)

The in-structure amplification factor AF_{SH} is derived from Figure 4-3 in Reference [4]. The in-cabinet amplification factor, AF_c is associated with a given type of cabinet construction. The three general cabinet types are identified in Reference [4] and Appendix I of EPRI NP-7148 [13] assuming 5% in-cabinet response spectrum damping. EPRI NP-7148 [13] classified the cabinet types as high amplification structures such as switchgear panels and other similar large flexible panels, medium amplification structures such as control panels and control room benchboard panels and low amplification structures such as motor control centers.

All of the electrical cabinets containing the components subject to high frequency confirmation (see Table B-1 in Appendix B) can be categorized into one of the in-cabinet amplification categories in Reference [4] as follows:

- Typical motor control center cabinets consisting of a lineup of several interconnected sections. Each section is a relatively narrow cabinet structure with height-to-depth ratios of about 4.5 that allow the cabinet framing to be efficiently used in flexure for the dynamic response loading, primarily in the front-to-back direction. This results in higher frame stresses and hence more damping which lowers the cabinet response. In addition, the subject components are not located on large unstiffened panels that could exhibit high local amplifications. These cabinets qualify as low amplification cabinets.
- Switchgear cabinets are large cabinets consisting of a lineup of several interconnected sections typical of the high amplification cabinet category. Each section is a wide box-type structure with height-to-depth ratios of about 1.5 and may include wide stiffened panels. This results in lower stresses and hence less damping which increases the enclosure response. Components can be mounted on the wide panels, which results in the higher in-cabinet amplification factors.
- Control cabinets are in a lineup of several interconnected sections with moderate width. Each section consists of structures with height-to-depth ratios of about 3 which results in moderate frame stresses and damping. The response levels are mid-range between MCCs and switchgear and therefore these cabinets can be considered in the medium amplification category.

3.4 Component Vertical Seismic Demand

The component vertical demand is determined using the peak acceleration of the VGMRS between 15 Hz and 40 Hz and amplifying it using the following two factors:

- Vertical in-structure amplification factor AF_{SV} to account for seismic amplification at floor elevations above the host building's foundation
- Vertical in-cabinet amplification factor AF_c to account for seismic amplification within the host equipment (cabinet, switchgear, motor control center, etc.)

The in-structure amplification factor AF_{SV} is derived from Figure 4-4 in Reference [4]. The in-cabinet amplification factor, AF_c is derived in Reference [4] and is 4.7 for all cabinet types.

4 CONTACT DEVICE EVALUATIONS

Seismic Screening Evaluation

Per Reference [4], seismic capacities (the highest seismic test level reached by the contact device without chatter or other malfunction) for each subject contact device are determined by the following procedures:

(1) If a contact device was tested as part of the EPRI High Frequency Testing program [11], then the component seismic capacity from this program is used.
(2) If a contact device was not tested as part of [11], then one or more of the following means to determine the component capacity were used:
   (a) Device-specific seismic test reports (either from the station or from the SQURTS testing program.
   (b) Generic Equipment Ruggedness Spectra (GERS) capacities per [14] and [15].
   (c) Assembly (e.g. electrical cabinet) tests where the component functional performance was monitored.

The high-frequency capacity of each device was evaluated with the component mounting point demand from Section 3 using the criteria in Section 4.5 of Reference [4]. The high-frequency seismic screening evaluations as described above are discussed in detail in Ref. [16].

Functional Screening Evaluation

Given the methodology undertaken for this report due to the recent completion of contact device mapping as part of the ongoing WCGS SPRA (refer to Section 2 of this report), the aforementioned seismic screening evaluation was performed on a superset of all contact devices associated with control of components important to the high frequency program. This superset contains devices covered by the high frequency program and those devices that screen out from consideration because they do not meet the functional selection criteria of Reference [4].

Accordingly, contact devices that did not seismically screen based upon sufficient capacity in exceedance of GMRS demand underwent a functional screening as documented in report 16C4405-RPT-003 [17]. The functional screening of relays and switches for high frequency seismic evaluation under EPRI 3002004396 [4] involves the examination of control subsystems in a three-step process: (1) functional analysis, (2) circuit analysis, and (3) chatter analysis. Each of these steps was performed on the control circuits containing devices that were not seismically screened, using established guidance for this type of analysis. Those devices which cannot be seismically or functionally screened are considered outliers in the High Frequency Program

A summary of the high-frequency evaluation conclusions is provided in Table B-1 in Appendix B.

5 CONCLUSIONS

5.1 General Conclusions

Wolf Creek Generating Station has performed a High Frequency Confirmation evaluation in response to the NRC's 50.54(f) letter [1] using the methods in EPRI report 3002004396 [4].

The evaluation identified a total of 527 components that required evaluation. As summarized in Table B-1 in Appendix B, 452 of the devices have adequate seismic capacity demonstrated by seismic screening, 37 screened functionally, and 38 components required resolution following the criteria in Section 4.6 of Reference [4].

For the 38 components requiring resolution, three options are being explored to adequately resolve potential seismic concern. In order to demonstrate sufficient seismic capacity in exceedance of GMRS demand, more detailed approaches for mounting point seismic demand and seismic capacity (including additional component testing) are being considered. Should the demonstration of adequate seismic screening for the GMRS not be feasible, actions will be identified that can adequately resolve potential seismic concerns.

5.2 Identification of Follow-Up Actions

The scoping of analytical and/or testing efforts for 38 components requiring resolution as identified in Table B-1 is being performed as a follow-up action of this report. Should the demonstration of adequate seismic screening for the GMRS not be feasible, operator actions have been identified that can adequately resolve potential seismic concerns. The final documentation of seismic adequacy of these 38 components by analytical, testing, or operator action approaches are expected to be completed 30 days after completion of WCGS Refueling Outage 22.

6 REFERENCES

[1] NRC (E. Leeds and M. Johnson) Letter to All Power Reactor Licensees et al., "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3 and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident," ADAMS Accession Number ML12053A340, March 12, 2012.

[2] NRC Report, "Recommendations for Enhancing Reactor Safety in the 21st Century," ADAMS Accession Number ML111861807, July 12, 2011.

[3] EPRI Report 1025287, "Seismic Evaluation Guidence: Screening, Prioritization, and Implimentation Details (SPID) for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic," Final Report, February 2013.

[4] EPRI Report 3002004396, "High Frequency Program: Application Guidance for Functional Confirmation and Fragility Evaluation," Final Report, July 2015.

[5] NRC (J. Davis) Letter to Nuclear Energy Institute (A. Mauer), "Endorsement of Electric Power Research Institute Final Draft Report 3002004396, 'High Frequency Program: Application Guidance for Functional Confirmation and Fragility.'," ADAMS Accession Number ML15218A569, September 17, 2015.

[6] NRC (W. Dean) Letter to the Power Reactor Licensees on the Enclosed List, "Final Determination of Licensee Seismic Probabilistic Risk Assessments Under the Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendation 2.1 'Seismic' of the Near-Term Task Force Review...," ADAMS Accession Number ML15194A015, October 27, 2015.

[7] WCNOC Letter (WO 14-0042) to NRC, "Wolf Creek Nuclear Operating Corporation's Seismic Hazard and Screening Report (CEUS Sites), Response NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima...," ADAMS Accession Number ML14097A020, March 31, 2014.

[8] NRC (F. Vega) Letter to WCNOC (A. Heflin), "Wolf Creek Generating Station - Staff Assessment of Information Provided Pursuant to Title 10 of the Code of Federal Regulations Part 50, Section 50.54(f), Seismic Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of...," ADAMS Accession Number ML15216A320, August 12, 2015.

[9] Stevenson & Associates Calculation 13C4152-CAL-009 Rev. 1, "Summary of Relay

Screening for WCGS S-PRA.".

[10] Wolf Creek Report, "Updated Safety Analysis Report (USAR)," Rev. 26, March 11, 2013.

[11] EPRI Report 3002002997, "High Frequency Program: High Frequency Testing Summary," Final Report, September 2014.

[12] Stevenson & Associates Report 16C4405-RPT-001, Rev. 0, "Selection of Relays and Switches for High Frequency Seismic Evaluation.".

[13] EPRI Report NP-7148-SL, "Procedure for Evaluating Nuclear Power Plant Relay Seismic Functionality," Final Report December 1990.

[14] EPRI Report NP-7147-SL, "Seismic Ruggedness of Relays," Final Report August 1991.

[15] SQUG Advisory 2004-02, "Relay GERS Corrections," September 7, 2004.

[16] Stevenson & Associates Calculation 16C4405-CAL-001, Rev. 0, "High Frequency Functional Confirmation and Fragility Evaluation of Relays.".

[17] Stevenson & Associates Report 16C4405-RPT-003 Rev. 0, "Functional Screening of Relays and Switches for High Frequency Seismic Evaluation at WCGS.".

A. REPRESENTATIVE SAMPLE COMPONENT EVALUATIONS

A detailed example analysis of two components is provided within this section and reproduced from Ref. [16]. This example is intended to illustrate each step of the high frequency analysis methodology given in Section 4 [4].

A.1. High Frequency Seismic Demand

Calculate the high-frequency seismic demand on the components per the methodology from Reference [4].

Sample calculations for the high-frequency seismic demand of components 150G @ NB00215 (contained in NB002) and 186/T @ NB00210 (contained in NB002) located in the Control Building. Ref. [16] calculates the high-frequency seismic demand for all of the subject components.

A.1.1 Horizontal Seismic Demand

The horizontal site-specific GMRS for WCGS GMRS data can be found in Section 2 of Ref. [16]

Determine the peak acceleration of the horizontal GMRS between 15 Hz and 40 Hz.

Peak acceleration of horizontal GMRS between 15 Hz and 40 Hz (see Table 6.2 of Ref. [16]): $SA_{GMRS} = 0.683g$ (at 15 Hz)

Calculate the horizontal in-structure amplification factor based on the distance between the bottom of the foundation elevation and the subject floor elevation.

Bottom of Deepest Foundation Elevation: $EL_{found} = 1968$ ft

Component Floor Elevation $EL_{comp} = 2000$ ft

Components 150G @ NB00215 and 186/T @ NB00210 are both located in the Control Building at Elevation 2000'-0"

Distance Between Component Floor and Foundation Elevation: $h_{comp} = EL_{comp} - EL_{found} = 32$ ft

Work the distance between the component floor and foundation with Ref. [4], Fig. 4-3 to calculate the horizontal in-structure amplification factor:

Slope of Amplification Factor Line,	$m_h = \frac{2.1-1.2}{40ft-0ft} = 0.225\frac{1}{ft}$
0ft < h_{comp} < 40ft	
Intercept of Amplification Factor Line,	b_h 1.2
0ft < hcomp < 40ft	
Horizontal In-Structure Amplification Factor (Ref. [4], p.4-13):	$AF_{SH}(h_{comp}) = (m_h * h_{comp} + b_h)$ if h_{comp} <= 40ft
	2.1 otherwise
	$AF_{SH}(h_{comp})$ = 1.92

Calculate the horizontal in-cabinet amplification factor based on the type of cabinet that contains the subject component.

Type of Cabinet	cab = "Switchgear"
(enter "MCC", "Switchgear", "Control	
Cabinet", or "Rigid"):	
Horizontal In-Cabinet Amplification Factor (Ref. [4], p. 4-13)::	$AF_{c.h}$(cab) = 3.6 if cab = "MCC"
	7.2 if cab = "Switchgear"
	4.5 if cab = "Control Cabinet"
	1.0 if cab = "Rigid"
	$AF_{c.h}$(cab) = 7.2

Multiply the peak horizontal GMRS acceleration between by the horizontal in-structure and in-cabinet amplification factors to determine the in-cabinet response spectrum demand on the components.

Horizontal In-Cabinet Response Spectrum:	$ICRS_{c.h} = AF_{SH} * AF_{c.h} * SAH_{GMRS}$ = 9.44g

Note that the horizontal seismic demand is the same for both components, but the In-Cabinet Amplification Factor is not applied when the capacity is calculated per Section 6.3.1 of Ref. [16].

A.1.2 Vertical Seismic Demand

Determine the peak acceleration of the horizontal GMRS between 15 Hz and 40 Hz.

Peak acceleration of horizontal GMRS between 15 Hz and 40 Hz (see Table 6.2 of Ref. [16]): $SA_{GMRS} = 0.683g$ (at 15 Hz)

Obtain the peak ground acceleration (PGA) of the horizontal GMRS (See Table 6.2 of Ref. [16]).

Peak Ground Acceleration (GMRS) $PGA_{GMRS} = 0.727g$

Calculate the shear wave velocity traveling from a depth of 30m to the surface of the site (Vs30) from Ref. [4]

Shear Wave Velocity:

$$V_{s30} = \frac{(30m)}{\Sigma\left(\frac{d_i}{V_{si}}\right)}$$

where,

d_i: Thickness of the layer (ft), V_{si}: Shear wave velocity of the layer (ft/s)

Per Table 6.1 of Ref. [16], the sum of thickness of the layer over shear wave velocity of the layer is 0.0496 sec.

Shear Wave Velocity: $VS_{30} = 30\ m / 0.0496sec = 1983\ ft/sec$

Work the PGA and shear wave velocity with Ref. [4], Table 3-1 to determine the soil class of the site. Based on the PGA of 0.727g and shear wave velocity of 1983 ft/sec at Wolf Creek, the site soil class is A-Hard. Work the site soil class with Ref. [4], Table 3-2 to determine the mean vertical vs. horizontal GMRS ratios (V/H) at each spectral frequency. Multiply the V/H ratio at each frequency between 15Hz and 40Hz by the corresponding horizontal GMRS acceleration at each frequency between 15Hz and 40Hz to calculate the vertical GMRS. Table 6.2 of Ref. [16] calculates the vertical GMRS (equal to (V/H) x horizontal GMRS).

Determine the peak acceleration of the vertical GMRS (SAVGMRS) between frequencies of 15Hz and 40Hz.

V/H Ratio at 15Hz (See Table 6.2 of Ref. [16]): VH = 0.67

Horizontal GMRS at Frequency of Peak Vertical GMRS (at 15Hz) (See Table 6.2 of Ref. [16]):	HGMRS = 0.683g
Peak Acceleration of Vertical GMRS Between 15 Hz and 40 Hz:	SAV_{GMRS} = VH * HGMRS = 0.458g (at 15 Hz)

Calculate the vertical in-structure amplification factor based on the distance between the plant foundation elevation and the subject floor elevation.

Distance Between Component Floor and Foundation:	h_{comp} = 32 ft

Work the distance between the component floor and foundation with Ref. [4], Fig. 4-4 to calculate the vertical in-structure amplification factor.

Slope of Amplification Factor Line	$M_v = \frac{2.7-1.0}{100ft-0ft} = 0.017\frac{1}{ft}$
Intercept of Amplification Factor Line	B_v 1.0
Vertical In-Structure Amplification Factor:	$AF_{SV}(h_{comp}) = (m_v * h_{comp} + b_v)$ if h_{comp} <= 40ft 2.1 otherwise $AF_{SV}(h_{comp})$ = 1.54

Per Ref. [4] the vertical in-cabinet amplification factor is 4.7 regardless of cabinet type.

Vertical In-Cabinet Amplification Factor:	$AF_{c.v}$ =4.7

Multiply the peak vertical GMRS acceleration between by the vertical in-structure and in-cabinet amplification factors to determine the in-cabinet response spectrum demand on the component.

Vertical In-Cabinet Response Spectrum (Ref. [4], p. 4-12, Eq. 4-1b):	$ICRSc.v = AF_{SV} * AF_{c.v} * SAV_{GMRS}$ = 3.32g

Note that the vertical seismic demand is the same for both components, but the In-Cabinet Amplification Factor is not applied when the capacity is calculated per Section 6.3.1.

A.2. High Frequency Capacity

A sample calculation for the high-frequency seismic capacity of components 150G @ NB00215 (contained in NB002) and 186/T @ NB00210 (contained in NB002) is presented here. A table that calculates the high-frequency seismic capacities for all the subject components listed in Table 1.1 of Ref. [16]. Table 6.3 of Ref. 16 contains the demands for all plant locations that contain essential relays.

A.2.1 Seismic Test Capacity

The high frequency seismic capacity of a component can be determined from the EPRI High Frequency Testing Program or other broad banded low frequency capacity data such as the Generic Equipment Ruggedness Spectra (GERS) or other qualification reports.

The model for component 150G @ NB00215, a General Electric 12PJC11AV1A relay per Table 1.1 of Ref. [16], was not tested as part of the high-frequency testing program. Section 6.3.1.4 of Ref. [16] provides a high-frequency seismic capacity estimation relay based on WCGS seismic qualification. The seismic capacity was calculated in Section 6.3.1.4 of Ref. [16] to be 3.03g horizontal and 2.08g vertical for component 150G @ NB00215.

The model for component 186/T @ NB00210 is a General Electric 12HEA61B235 relay per Table 1.1 of Ref. [16], was not tested as part of the high-frequency testing program. High Frequency capacity was determined to be 21.8g per 16C4405-RPT-001 [12].

A.2.2 Seismic Capacity Knockdown Factor

Determine the seismic capacity knockdown factor for the subject relay based on the type of testing used to determine the seismic capacity of the relay. Using table 4-2 of Ref. [4], the knockdown factors are chosen as:

Seismic capacity knockdown factor:	Fk = 1.2	(150G @ NB00215)
	Fk = 1.5	(186/T @ NB00210)

A.2.3 Seismic Testing Single-Axis Correction Factor

Determine the seismic testing single-axis correction factor of the subject relay, which is based on whether the equipment housing to which the relay is mounted has well-separated horizontal and vertical motion or not. Per Ref. [4], pp. 4-17 to 4-18, relays mounted within cabinets that are

braced, bolted together in a row, mounted to both floor and wall, etc. will have a correction factor of 1.00. Relays mounted within cabinets that are bolted only to the floor or otherwise not well-braced will have a correction factor of 1.2. Per Ref. [4], pp. 4-18, conservatively take the FMS value as 1.0.

Single-axis correction factor (Ref. [4], pp. 4-17 to 4-18):	$F_{MS} = 1.0$

A.2.4 Effective Wide-Band Component Capacity Acceleration

Calculate the effective wide-band component capacity acceleration per Ref. [4], Eq. 4-5.

Effective wide-band component capacity acceleration (Ref. [4], Eq. 4-5)	$TRS = \frac{SAt}{Fk} * Fms =$	
	TRS = 1.73g	(150G @ NB00215)
	TRS = 14.53g	(186/T @ NB00210)

A.2.5 Component Margin

Calculate the high-frequency seismic margin for relays per Ref. [4], Eq. 4-6. A sample calculation for the high-frequency seismic demand of relay components 150G @ NB00215 and 186/T @ NB00210 is presented here. A table that calculates the high-frequency seismic margin for all of the subject relays listed in Table 1.1 of Ref. [16] is provided in Table 6.3 of Ref. [16].

Horizontal seismic margin (Ref. [4], Eq. 4-6):	$\frac{TRS}{ICRSc.h} =$	1.32 > 1.0, OK	(150G @ NB00215)
		1.54 > 1.0, OK	(186/T @ NB00210)
Vertical seismic margin (Ref. [4], Eq. 4-6):	$\frac{TRS}{ICRSc.v} =$	2.45 > 1.0, OK	(150G @ NB00215)
		4.38> 1.0, OK	(186/T @ NB00210)

B. COMPONENTS IDENTIFIED FOR HIGH FREQUENCY CONFIRMATION

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
1	72 @ BB007	Relay	Gould	P102D12	BB007	Control Cabinet	AUX	2026-00	Not Available	Functionally Screens
2	AR @ BB007	Relay	Struthers & Dunn	219BBX221NE (ND, NO)	BB007	Control Cabinet	AUX	2026-00	GERS	Functionally Screens
3	72 @ BB008	Relay	Gould	P102D12	BB008	Control Cabinet	AUX	2026-00	Not Available	Functionally Screens
4	AR @ BB008	Relay	Struthers & Dunn	219BBX221NE (ND, NO)	BB008	Control Cabinet	AUX	2026-00	GERS	Functionally Screens
5	EFPDS0019A @ EF155	Pressure Switch	SOR	103AS-B803-NX	EF155	Control Cabinet	ESW	2014-11	WCGS report	Cap > Dem
6	EFPDS0020A @ EF156	Pressure Switch	SOR	103AS-B803-NX	EF156	Control Cabinet	ESW	2014-06	Not Available	Functionally Screens
7	42C @ FC0219	Relay	Schneider Electric	LADN31	FC0219	Wall Mounted	AUX	2002-00	WCGS report	Cap > Dem
8	42O @ FC0219	Relay	Schneider Electric	LADN31	FC0219	Wall Mounted	AUX	2002-00	WCGS report	Cap > Dem
9	5(CON1) @ FC0219	Relay	Schneider Electric	LADN31	FC0219	Wall Mounted	AUX	2002-00	WCGS report	Cap > Dem
10	CR2 @ FC0219	Relay	IDEC	RH4B-UL	FC0219	Wall Mounted	AUX	2002-00	SQUG Advisory 2004-02	Cap > Dem
11	CR3 @ FC0219	Relay	IDEC	RH4B-UL	FC0219	Wall Mounted	AUX	2002-00	SQUG Advisory 2004-02	Cap > Dem
12	CR4 @ FC0219	Relay	IDEC	RH4B-UL	FC0219	Wall Mounted	AUX	2002-00	SQUG Advisory 2004-02	Cap > Dem
13	CR7 @ FC0219	Relay	IDEC	RH4B-UL	FC0219	Wall Mounted	AUX	2002-00	SQUG Advisory 2004-02	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
14	CR8 @ FC0219	Relay	IDEC	RH4B-UL	FC0219	Wall Mounted	AUX	2002-00	SQUG Advisory 2004-02	Cap > Dem
15	FCSC0313 @ FC0219	Relay	Dresser-Rand	890354-001	FC0219	Wall Mounted	AUX	2002-00	WCGS report	Cap > Dem
16	FCZC0313 @ FC0219	Relay	Dresser-Rand	890265-010	FC0219	Wall Mounted	AUX	2002-00	WCGS report	Cap > Dem
17	4A @ KJ0121	Relay	ITE/Gould	J13P3012 (Class J)	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
18	4B @ KJ0121	Relay	ITE/Gould	J13P3012 (Class J)	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
19	5A @ KJ0121	Relay	Agastat	7022PE (ND, ALL)	KJ0121	Control Cabinet	DGB	2000-00	GERS	Functionally Screens
20	5B @ KJ0121	Relay	ITE/Gould	J13P3012 (Class J)	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
21	5E @ KJ0121	Relay	ITE/Gould	J13P3012 (Class J)	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
22	ASR @ KJ0121	Relay	ITE/Gould	J13P2012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
23	BDR @ KJ0121	Relay	ITE/Gould	J13P2012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
24	CC2 @ KJ0121	Relay	ITE/Gould	J13P2012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
25	CC3 @ KJ0121	Relay	ITE/Gould	J13P3012 (Class J)	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
26	CC4 @ KJ0121	Relay	ITE/Gould	J13P3012 (Class J)	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
27	CT1 @ KJ0121	Relay	ITE/Gould	J14P2012	KJ0121	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
28	CT2 @ KJ0121	Relay	ITE/Gould	J14P2012	KJ0121	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
29	CT3 @ KJ0121	Relay	ITE/Gould	J14P4012	KJ0121	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
30	CT4 @ KJ0121	Relay	ITE/Gould	J14P4012	KJ0121	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
31	EOR @ KJ0121	Relay	ITE/Gould	J13P3012 (Class J)	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
32	ESA @ KJ0121	Relay	ITE/Gould	J13P2012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
33	ESB @ KJ0121	Relay	ITE/Gould	J13P2012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
34	HSR @ KJ0121	Relay	ITE/Gould	J13P3012 (Class J)	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
35	LSR @ KJ0121	Relay	ITE/Gould	J13P2012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
36	OP1 @ KJ0121	Relay	ITE/Gould	J14P2012	KJ0121	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
37	OP2 @ KJ0121	Relay	ITE/Gould	J14P2012	KJ0121	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
38	OP3 @ KJ0121	Relay	ITE/Gould	J14P4012	KJ0121	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
39	OP4 @ KJ0121	Relay	ITE/Gould	J14P4012	KJ0121	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
40	SDR @ KJ0121	Relay	ITE/Gould	J13P2012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
41	SFR @ KJ0121	Relay	ITE/Gould	J13P3012 (Class J)	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
42	T2A @ KJ0121	Relay	Agastat	7012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
43	T2B @ KJ0121	Relay	Agastat	7012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
44	TACH @ KJ0121	Relay	Dynalco	SST-2400A	KJ0121	Control Cabinet	DGB	2000-00	WCGS report	Cap > Dem
45	TD3 @ KJ0121	Relay	Agastat	7014	KJ0121	Control Cabinet	DGB	2000-00	GERS	Cap > Dem
46	TD3A @ KJ0121	Relay	ITE/Gould	J13P2012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
47	TSR @ KJ0121	Relay	ITE/Gould	J13P2012	KJ0121	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
48	4A @ KJ0122	Relay	ITE/Gould	J13P3012 (Class J)	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
49	4B @ KJ0122	Relay	ITE/Gould	J13P3012 (Class J)	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
50	5A @ KJ0122	Relay	Agastat	7022PE (ND, ALL)	KJ0122	Control Cabinet	DGB	2000-00	GERS	Functionally Screens
51	5B @ KJ0122	Relay	ITE/Gould	J13P3012 (Class J)	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
52	5E @ KJ0122	Relay	ITE/Gould	J13P3012 (Class J)	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
53	ASR @ KJ0122	Relay	ITE/Gould	J13P2012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
54	BDR @ KJ0122	Relay	ITE/Gould	J13P2012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
55	CC2 @ KJ0122	Relay	ITE/Gould	J13P2012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
									2004-02	
56	CC3 @ KJ0122	Relay	ITE/Gould	J13P3012 (Class J)	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
57	CC4 @ KJ0122	Relay	ITE/Gould	J13P3012 (Class J)	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
58	CT1 @ KJ0122	Relay	ITE/Gould	J14P2012	KJ0122	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
59	CT2 @ KJ0122	Relay	ITE/Gould	J14P2012	KJ0122	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
60	CT3 @ KJ0122	Relay	ITE/Gould	J14P4012	KJ0122	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
61	CT4 @ KJ0122	Relay	ITE/Gould	J14P4012	KJ0122	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
62	EOR @ KJ0122	Relay	ITE/Gould	J13P3012 (Class J)	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
63	ESA @ KJ0122	Relay	ITE/Gould	J13P2012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
64	ESB @ KJ0122	Relay	ITE/Gould	J13P2012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
65	HSR @ KJ0122	Relay	ITE/Gould	J13P3012 (Class J)	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
66	LSR @ KJ0122	Relay	ITE/Gould	J13P2012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
67	OP1 @ KJ0122	Relay	ITE/Gould	J14P2012	KJ0122	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
68	OP2 @ KJ0122	Relay	ITE/Gould	J14P2012	KJ0122	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
69	OP3 @ KJ0122	Relay	ITE/Gould	J14P4012	KJ0122	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
70	OP4 @ KJ0122	Relay	ITE/Gould	J14P4012	KJ0122	Control Cabinet	DGB	2000-00	WCGS report	Requires Resolution
71	SDR @ KJ0122	Relay	ITE/Gould	J13P2012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
72	SFR @ KJ0122	Relay	ITE/Gould	J13P3012 (Class J)	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
73	T2A @ KJ0122	Relay	Agastat	7012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
74	T2B @ KJ0122	Relay	Agastat	7012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
75	TACH @ KJ0122	Relay	Dynalco	SST-2400A	KJ0122	Control Cabinet	DGB	2000-00	WCGS report	Cap > Dem
76	TD3 @ KJ0122	Relay	Agastat	7014	KJ0122	Control Cabinet	DGB	2000-00	GERS	Cap > Dem
77	TD3A @ KJ0122	Relay	ITE/Gould	J13P2012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
78	TSR @ KJ0122	Relay	ITE/Gould	J13P2012	KJ0122	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
79	EOS @ TVKJ01	Micro Switch	Micro-Switch	BZV6-2RQ2	KKJ01A	Unknown	DGB	2000-00	WCGS report	Cap > Dem
80	KJPS0062 @ TVKJ19	Pressure Switch	SOR	4N6-B5-NX-C1A-JJTTX12	KKJ01A	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
81	KJPSH0023B @ TVKJ01	Pressure Switch	SOR	12N6-B45-NX-C1A-JJTTX7	KKJ01A	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
82	KJPSH0023C @ TVKJ01	Pressure Switch	SOR	12N6-B45-NX-C1A-JJTTX7	KKJ01A	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
83	KJPSH0023D @ TVKJ01	Pressure Switch	SOR	12N6-B45-NX-C1A-JJTTX7	KKJ01A	Skid Mounted	DGB	2000-00	GERS	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
84	KJPSL0026A @ TVKJ01	Pressure Switch	Detroit Switch Inc.	222-1024-NB4	KKJ01A	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
85	KJPSL0026B @ TVKJ01	Pressure Switch	Detroit Switch Inc.	222-1024-NB4	KKJ01A	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
86	KJPSL0026C @ TVKJ01	Pressure Switch	Detroit Switch Inc.	222-1024-NB4	KKJ01A	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
87	KJPSL0026D @ TVKJ01	Pressure Switch	Detroit Switch Inc.	222-1024-NB4	KKJ01A	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
88	KJTSH0059A @ TVKJ01	Temperature Switch	SOR	201TA-B125-JJTTX9	KKJ01A	Skid Mounted	DGB	2000-00	Vendor report	Cap > Dem
89	KJTSH0059B @ TVKJ01	Temperature Switch	SOR	201TA-B125-JJTTX9	KKJ01A	Skid Mounted	DGB	2000-00	Vendor report	Cap > Dem
90	KJTSH0059C @ TVKJ01	Temperature Switch	SOR	201TA-B125-JJTTX9	KKJ01A	Skid Mounted	DGB	2000-00	Vendor report	Cap > Dem
91	KJTSH0059D @ TVKJ01	Temperature Switch	SOR	201TA-B125-JJTTX9	KKJ01A	Skid Mounted	DGB	2000-00	Vendor report	Cap > Dem
92	EOS @ TVKJ02	Micro Switch	Micro-Switch	BZV6-2RQ2	KKJ01B	Unknown	DGB	2000-00	WCGS report	Cap > Dem
93	KJPS0162 @ TVKJ20	Pressure Switch	SOR	4N6-B5-NX-C1A-JJTTX12	KKJ01B	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
94	KJPSH0123B @ TVKJ02	Pressure Switch	SOR	12N6-B45-NX-C1A-JJTTX7	KKJ01B	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
95	KJPSH0123C @ TVKJ02	Pressure Switch	SOR	12N6-B45-NX-C1A-JJTTX7	KKJ01B	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
96	KJPSH0123D @ TVKJ02	Pressure Switch	SOR	12N6-B45-NX-C1A-JJTTX7	KKJ01B	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
97	KJPSL0126A @ TVKJ02	Pressure Switch	Detroit Switch Inc.	222-1024-NB4	KKJ01B	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
98	KJPSL0126B @ TVKJ02	Pressure Switch	Detroit Switch Inc.	222-1024-NB4	KKJ01B	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
99	KJPSL0126C @ TVKJ02	Pressure Switch	Detroit Switch Inc.	222-1024-NB4	KKJ01B	Skid Mounted	DGB	2000-00	GERS	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
100	KJPSL0126D @ TVKJ02	Pressure Switch	Detroit Switch Inc.	222-1024-NB4	KKJ01B	Skid Mounted	DGB	2000-00	GERS	Cap > Dem
101	KJTSH0159A @ TVKJ02	Temperature Switch	SOR	201TA-B125-JJTTX9	KKJ01B	Skid Mounted	DGB	2000-00	Vendor report	Cap > Dem
102	KJTSH0159B @ TVKJ02	Temperature Switch	SOR	201TA-B125-JJTTX9	KKJ01B	Skid Mounted	DGB	2000-00	Vendor report	Cap > Dem
103	KJTSH0159C @ TVKJ02	Temperature Switch	SOR	201TA-B125-JJTTX9	KKJ01B	Skid Mounted	DGB	2000-00	Vendor report	Cap > Dem
104	KJTSH0159D @ TVKJ02	Temperature Switch	SOR	201TA-B125-JJTTX9	KKJ01B	Skid Mounted	DGB	2000-00	Vendor report	Cap > Dem
105	103CL @ NB00111	Relay	GE	HGA111J2	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
106	125F @ NB00109	Relay	Basler Electric	M1GA6PN5S3F	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
107	125F @ NB00112	Relay	Basler Electric	M1GA6PN5S3F	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
108	127-1DG @ NB00101	Relay	GE	12NGV28B1A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
109	127-2DG @ NB00113	Relay	GE	12NGV28B1A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
110	127-2F(109) @ NB00111	Relay	GE	12NGV13B25A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
111	127-2F(112) @ NB00111	Relay	GE	12NGV13B25A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
112	127-3DG @ NB00117	Relay	GE	12NGV28B1A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
113	127-4DG @ NB00116	Relay	GE	12NGV28B1A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
114	150-151/T-A @ NB00110	Relay	GE	12IAC53B812A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
115	150-151/T-A @ NB00113	Relay	GE	12IAC53B812A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
116	150-151/T-A @ NB00116	Relay	GE	12IAC53B812A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
117	150-151/T-B @ NB00110	Relay	GE	12IAC53B812A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
118	150-151/T-B @ NB00113	Relay	GE	12IAC53B812A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
119	150-151/T-B @ NB00116	Relay	GE	12IAC53B812A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
120	150-151/T-C @ NB00110	Relay	GE	12IAC53B812A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
121	150-151/T-C @ NB00113	Relay	GE	12IAC53B812A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
122	150-151/T-C @ NB00116	Relay	GE	12IAC53B812A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
123	150-151-A @ NB00115	Relay	GE	12IAC66K8A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
124	150-151-B @ NB00115	Relay	GE	12IAC66K8A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
125	150-151-C @ NB00115	Relay	GE	12IAC66K8A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
126	150G @ NB00115	Relay	GE	12PJC11AV1A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
127	151DG-A @ NB00111	Relay	GE	12IAC66A2A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
128	151DG-B @ NB00111	Relay	GE	12IAC66A2A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
129	151DG-C @ NB00111	Relay	GE	12IAC66A2A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
130	151F-A @ NB00109	Relay	GE	12IAC53A803A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
131	151F-A @ NB00112	Relay	GE	12IAC53A803A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
132	151F-B @ NB00109	Relay	GE	12IAC53A803A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
133	151F-B @ NB00112	Relay	GE	12IAC53A803A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
134	151F-C @ NB00109	Relay	GE	12IAC53A803A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
135	151F-C @ NB00112	Relay	GE	12IAC53A803A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
136	151G/T @ NB00110	Relay	GE	12PJC11AV1A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
137	151G/T @ NB00113	Relay	GE	12PJC11AV1A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
138	151G/T @ NB00116	Relay	GE	12PJC11AV1A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
139	151G-F @ NB00109	Relay	GE	12IAC53A801A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
140	151G-F @ NB00112	Relay	GE	12IAC53A801A	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
141	151N/T @ NB00116	Relay	Not Available	Not Available	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
142	152NB00110 @ NB00110	Circuit Breaker	Siemens	5KV-3AF-GER-350-1200-78	NB001	Switchgear	CB	2000-00	WCGS report	Requires Resolution
143	152NB00111 @ NB00111	Circuit Breaker	Siemens	5KV-3AF-GER-350-2000-78	NB001	Switchgear	CB	2000-00	WCGS report	Requires Resolution
144	152NB00113 @ NB00113	Circuit Breaker	Siemens	5KV-3AF-GER-350-2000-78	NB001	Switchgear	CB	2000-00	WCGS report	Requires Resolution
145	152NB00115 @ NB00115	Circuit Breaker	Siemens	5KV-3AF-GER-350-1200-78	NB001	Switchgear	CB	2000-00	WCGS report	Requires Resolution
146	152NB00116 @ NB00116	Circuit Breaker	Siemens	5KV-3AF-GER-350-1200-78	NB001	Switchgear	CB	2000-00	WCGS report	Requires Resolution
147	186/T @ NB00110	Relay	GE	12HEA61B235	NB001	Switchgear	CB	2000-00	EPRI HF Test	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
148	186/T @ NB00113	Relay	GE	12HEA61B235	NB001	Switchgear	CB	2000-00	EPRI HF Test	Cap > Dem
149	186/T @ NB00116	Relay	GE	12HEA61B235X2	NB001	Switchgear	CB	2000-00	EPRI HF Test	Cap > Dem
150	186F @ NB00109	Relay	GE	HEA61B234	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
151	186F @ NB00112	Relay	GE	HEA61B234	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
152	186M @ NB00115	Relay	GE	HEA61A224	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
153	286-1T1 @ NB00112	Relay	GE	HEA99AL or HEA61BA	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
154	286-2T2 @ NB00109	Relay	GE	HEA99AL or HEA61BA	NB001	Switchgear	CB	2000-00	WCGS report	Cap > Dem
155	103CL @ NB00211	Relay	GE	HGA111J2	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
156	103CL @ NB00215	Relay	GE	HGA111J2	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
157	125F @ NB00209	Relay	Basler Electric	M1GA6PN5S3F	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
158	125F @ NB00212	Relay	Basler Electric	M1GA6PN5S3F	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
159	127-1DG @ NB00210	Relay	GE	12NGV28B1A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
160	127-2DG @ NB00216	Relay	GE	12NGV28B1A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
161	127-2F(209) @ NB00211	Relay	GE	12NGV13B25A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
162	127-2F(212) @ NB00211	Relay	GE	12NGV13B25A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
163	127-3DG @ NB00217	Relay	GE	12NGV28B1A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
164	127-4DG @ NB00201	Relay	GE	12NGV28B1A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
165	150-151/T-A @ NB00210	Relay	GE	12IAC53B812A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
166	150-151/T-A @ NB00213	Relay	GE	12IAC53B812A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
167	150-151/T-A @ NB00216	Relay	GE	12IAC53B812A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
168	150-151/T-B @ NB00210	Relay	GE	12IAC53B812A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
169	150-151/T-B @ NB00213	Relay	GE	12IAC53B812A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
170	150-151/T-B @ NB00216	Relay	GE	12IAC53B812A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
171	150-151/T-C @ NB00210	Relay	GE	12IAC53B812A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
172	150-151/T-C @ NB00213	Relay	GE	12IAC53B812A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
173	150-151/T-C @ NB00216	Relay	GE	12IAC53B812A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
174	150-151-A @ NB00215	Relay	GE	12IAC66K8A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
175	150-151-B @ NB00215	Relay	GE	12IAC66K8A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
176	150-151-C @ NB00215	Relay	GE	12IAC66K8A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
177	150G @ NB00215	Relay	GE	12PJC11AV1A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
178	151DG-A @ NB00211	Relay	GE	12IAC66A2A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
179	151DG-B @ NB00211	Relay	GE	12IAC66A2A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
180	151DG-C @ NB00211	Relay	GE	12IAC66A2A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
181	151F-A @ NB00209	Relay	GE	12IAC53A803A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
182	151F-A @ NB00212	Relay	GE	12IAC53A803A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
183	151F-B @ NB00209	Relay	GE	12IAC53A803A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
184	151F-B @ NB00212	Relay	GE	12IAC53A803A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
185	151F-C @ NB00209	Relay	GE	12IAC53A803A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
186	151F-C @ NB00212	Relay	GE	12IAC53A803A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
187	151G/T @ NB00210	Relay	GE	12PJC11AV1A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
188	151G/T @ NB00213	Relay	GE	12PJC11AV1A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
189	151G/T @ NB00216	Relay	GE	12PJC11AV1A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
190	151G-F @ NB00209	Relay	GE	12IAC53A801A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
191	151G-F @ NB00212	Relay	GE	12IAC53A801A	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
192	151N/T @ NB00216	Relay	Not Available	Not Available	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
193	152NB00210 @ NB00210	Circuit Breaker	Siemens	5KV-3AF-GER-350-1200-78	NB002	Switchgear	CB	2000-00	WCGS report	Requires Resolution
194	152NB00211 @ NB00211	Circuit Breaker	Siemens	5KV-3AF-GER-350-2000-78	NB002	Switchgear	CB	2000-00	WCGS report	Requires Resolution
195	152NB00213 @ NB00213	Circuit Breaker	Siemens	5KV-3AF-GER-350-2000-78	NB002	Switchgear	CB	2000-00	WCGS report	Requires Resolution

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
196	152NB00215 @ NB00215	Circuit Breaker	Siemens	5KV-3AF-GER-350-1200-78	NB002	Switchgear	CB	2000-00	WCGS report	Requires Resolution
197	152NB00216 @ NB00216	Circuit Breaker	Siemens	5KV-3AF-GER-350-1200-78	NB002	Switchgear	CB	2000-00	WCGS report	Requires Resolution
198	186/T @ NB00210	Relay	GE	12HEA61B235	NB002	Switchgear	CB	2000-00	EPRI HF Test	Cap > Dem
199	186/T @ NB00213	Relay	GE	12HEA61B235	NB002	Switchgear	CB	2000-00	EPRI HF Test	Cap > Dem
200	186/T @ NB00216	Relay	GE	12HEA61B235X2	NB002	Switchgear	CB	2000-00	EPRI HF Test	Cap > Dem
201	186F @ NB00209	Relay	GE	HEA61B234	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
202	186F @ NB00212	Relay	GE	HEA61B234	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
203	186M @ NB00215	Relay	GE	HEA61A224	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
204	195 @ NB00201	Relay	GE	12HEA61B232	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
205	195 @ NB00210	Relay	GE	12HEA61B232	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
206	195 @ NB00211	Relay	GE	12HEA61B232	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
207	I95 @ NB00213	Relay	GE	12HEA61B232	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
208	195 @ NB00215	Relay	Not Available	Not Available	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
209	286-1T2 @ NB00209	Relay	GE	HEA99AL or HEA61BA	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
210	286-2T1 @ NB00212	Relay	GE	HEA99AL or HEA61BA	NB002	Switchgear	CB	2000-00	WCGS report	Cap > Dem
211	102DG @ NE106	Relay	ABB	293B301A16A (Type: TD-5)	NE106	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Functionally Screens

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
212	124DG @ NE106	Relay	GE	12STV11A5A	NE106	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Requires Resolution
213	125DG @ NE106	Relay	Basler Electric	M1GA6PN5S3F	NE106	Control Cabinet	DGB	2000-00	WCGS report	Functionally Screens
214	127-1DG @ NE106	Relay	GE	12NGV23A1A	NE106	Control Cabinet	DGB	2000-00	WCGS report	Functionally Screens
215	132DG @ NE106	Relay	GE	290B038A09 (Type: CRN-1) (ND, NO)	NE106	Control Cabinet	DGB	2000-00	GERS	Cap > Dem
216	140DG @ NE106	Relay	Westinghouse	290B481A09 (Type: KLF)	NE106	Control Cabinet	DGB	2000-00	SQURTS test	Functionally Screens
217	151-127DG-A @ NE106	Relay	GE	12IJCV51A13A	NE106	Control Cabinet	DGB	2000-00	Vendor report	Cap > Dem
218	151-127DG-B @ NE106	Relay	GE	12IJCV51A13A	NE106	Control Cabinet	DGB	2000-00	Vendor report	Cap > Dem
219	151-127DG-C @ NE106	Relay	GE	12IJCV51A13A	NE106	Control Cabinet	DGB	2000-00	Vendor report	Cap > Dem
220	151N-DG @ NE106	Relay	Westinghouse	264C901A01 (Type: CO-9)	NE106	Control Cabinet	DGB	2000-00	SQURTS test	Requires Resolution
221	181DG @ NE106	Relay	GE	291B995A10 (Type: CF-1) (ND, NO)	NE106	Control Cabinet	DGB	2000-00	GERS	Cap > Dem
222	186-1DG @ NE106	Relay	GE	12HEA61C238	NE106	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
223	186-2DG @ NE106	Relay	GE	12HEA61B235	NE106	Control Cabinet	DGB	2000-00	EPRI HF Test	Cap > Dem
224	ESD @ NE106	Relay	ITE/Gould	J13P3012 (Class J)	NE106	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
225	ESX @ NE106	Relay	ITE/Gould	J13P2012	NE106	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
226	UPR @ NE106	Relay	Allen-Bradley	700DC-R530Z1 (Type-R)	NE106	Control Cabinet	DGB	2000-00	WCGS report	Functionally Screens

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
227	102DG @ NE107	Relay	ABB	293B301A16A (Type: TD-5)	NE107	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Functionally Screens
228	124DG @ NE107	Relay	GE	12STV11A5A	NE107	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Requires Resolution
229	125DG @ NE107	Relay	Basler Electric	M1GA6PN5S3F (BEI-25)	NE107	Control Cabinet	DGB	2000-00	WCGS report	Functionally Screens
230	127-1DG @ NE107	Relay	GE	12NGV13B25A	NE107	Control Cabinet	DGB	2000-00	SQURTS test	Functionally Screens
231	132DG @ NE107	Relay	GE	290B038A09 (Type: CRN-1) (ND, NO)	NE107	Control Cabinet	DGB	2000-00	GERS	Cap > Dem
232	140DG @ NE107	Relay	Westinghouse	1342D88A01 (Type: KLF)	NE107	Control Cabinet	DGB	2000-00	ABB Relay Selection Guide	Cap > Dem
233	151-127DG-A @ NE107	Relay	GE	12IJCV51A13A	NE107	Control Cabinet	DGB	2000-00	Vendor report	Cap > Dem
234	151-127DG-B @ NE107	Relay	GE	12IJCV51A13A	NE107	Control Cabinet	DGB	2000-00	Vendor report	Cap > Dem
235	151-127DG-C @ NE107	Relay	GE	12IJCV51A13A	NE107	Control Cabinet	DGB	2000-00	Vendor report	Cap > Dem
236	151N-DG @ NE107	Relay	Westinghouse	264C901A01 (Type: CO-9)	NE107	Control Cabinet	DGB	2000-00	SQURTS test	Requires Resolution
237	181DG @ NE107	Relay	Westinghouse	291B995A10 (Type: CF-1)	NE107	Control Cabinet	DGB	2000-00	GERS	Cap > Dem
238	186-1DG @ NE107	Relay	GE	12HEA61C238	NE107	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
239	186-2DG @ NE107	Relay	GE	12HEA61B235	NE107	Control Cabinet	DGB	2000-00	EPRI HF Test	Cap > Dem
240	ESD @ NE107	Relay	ITE/Gould	J13P3012 (Class J)	NE107	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
241	ESX @ NE107	Relay	ITE/Gould	J13P2012	NE107	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
242	UPR @ NE107	Relay	ITE/Gould	J13P3012 (Class J)	NE107	Control Cabinet	DGB	2000-00	SQUG Advisory 2004-02	Cap > Dem
243	K1101 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
244	K1102 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
245	K1117 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
246	K1121 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
247	K1138 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
248	K1148 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
249	K1149 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
250	K1173 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
251	K4101 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
252	K4102 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
253	K4117 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
254	K4122 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
255	K4138 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
256	K4148 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
257	K4149 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
258	K4173 @ NF039C	Relay	Struthers & Dunn	219BBX210	NF039C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
259	151N/T @ NG00101	Relay	GE	12IAC53A803A	NG001	Switchgear	CB/CC	2000-00	GERS	Requires Resolution
260	52NG00101 @ NG00101	Circuit Breaker	GE	AKR5A50	NG001	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
261	52NG00103 @ NG00103	Circuit Breaker	GE	AKR5A30	NG001	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
262	52NG00106 @ NG00106	Circuit Breaker	GE	AKR5A30	NG001	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
263	52XX @ NG00116	Relay	GE	HFA51A (ND-DC NC)	NG001	Switchgear	CB/CC	2000-00	GERS	Functionally Screens
264	86X/FTS @ NG00103	Relay	GE	HMA11 (ND-DC NC)	NG001	Switchgear	CB/CC	2000-00	GERS	Functionally Screens
265	42C @ NG001AER1	Relay	Not Available	Not Available	NG001A	Motor Control Center	CB/CC	2000-00	WCGS report	Cap > Dem
266	42O @ NG001AER1	Relay	Not Available	Not Available	NG001A	Motor Control Center	CB/CC	2000-00	WCGS report	Cap > Dem
267	42C @ NG001BBR3	Relay	Not Available	Not Available	NG001B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
268	42C @ NG001BDF3	Relay	Not Available	Not Available	NG001B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
269	42C @ NG001BEF2	Relay	Not Available	Not Available	NG001B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
270	42O @ NG001BBR3	Relay	Not Available	Not Available	NG001B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
271	42O @ NG001BDF3	Relay	Not Available	Not Available	NG001B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
272	42O @ NG001BEF2	Relay	Not Available	Not Available	NG001B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
273	151N/T @ NG00201	Relay	GE	12IAC53A803A	NG002	Switchgear	CB/CC	2000-00	GERS	Requires Resolution

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
274	52NG00201 @ NG00201	Circuit Breaker	GE	AKR5A50	NG002	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
275	52NG00203 @ NG00203	Circuit Breaker	GE	AKR5A30	NG002	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
276	52NG00206 @ NG00206	Circuit Breaker	GE	AKR5A30	NG002	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
277	52XX @ NG00216	Relay	GE	HFA51A (ND-DC NC)	NG002	Switchgear	CB/CC	2000-00	GERS	Functionally Screens
278	86X/FTS @ NG00203	Relay	GE	HMA11 (ND-DC NC)	NG002	Switchgear	CB/CC	2000-00	GERS	Functionally Screens
279	42C @ NG002AHF3	Relay	Not Available	Not Available	NG002A	Motor Control Center	CB/CC	2000-00	WCGS report	Cap > Dem
280	42O @ NG002AHF3	Relay	Not Available	Not Available	NG002A	Motor Control Center	CB/CC	2000-00	WCGS report	Cap > Dem
281	42C @ NG002BCF2	Relay	Not Available	Not Available	NG002B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
282	42C @ NG002BDF1	Relay	Not Available	Not Available	NG002B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
283	42O @ NG002BCF2	Relay	Not Available	Not Available	NG002B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
284	42O @ NG002BDF1	Relay	Not Available	Not Available	NG002B	Motor Control Center	AUX	2026-00	WCGS report	Cap > Dem
285	151N/T @ NG00301	Relay	GE	12IAC53A803A	NG003	Switchgear	CB/CC	2000-00	GERS	Requires Resolution
286	52NG00301 @ NG00301	Circuit Breaker	GE	AKR5A50	NG003	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
287	52NG00303 @ NG00303	Circuit Breaker	GE	AKR5A30	NG003	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
288	52NG00307 @ NG00307	Circuit Breaker	GE	AKR5A30	NG003	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
289	86X/FTS @ NG00303	Relay	GE	HMA11 (ND-DC NC)	NG003	Switchgear	CB/CC	2000-00	GERS	Functionally Screens

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
290	42C @ NG003CEF4	Relay	Not Available	Not Available	NG003C	Motor Control Center	AUX	2047-06	WCGS report	Cap > Dem
291	42O @ NG003CEF4	Relay	Not Available	Not Available	NG003C	Motor Control Center	AUX	2047-06	WCGS report	Cap > Dem
292	42 @ NG003DBF6	Relay	Not Available	Not Available	NG003D	Motor Control Center	DGB	2000-00	WCGS report	Cap > Dem
293	42 @ NG003DEF4	Relay	Not Available	Not Available	NG003D	Motor Control Center	DGB	2000-00	WCGS report	Cap > Dem
294	50G @ NG003DBF6	Relay	Gould	GRM-FC	NG003D	Motor Control Center	DGB	2000-00	GERS	Cap > Dem
295	151N/T @ NG00401	Relay	GE	12IAC53A803A	NG004	Switchgear	CB/CC	2000-00	GERS	Requires Resolution
296	52NG00401 @ NG00401	Circuit Breaker	GE	AKR5A50	NG004	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
297	52NG00403 @ NG00403	Circuit Breaker	GE	AKR5A30	NG004	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
298	52NG00407 @ NG00407	Circuit Breaker	GE	AKR5A30	NG004	Switchgear	CB/CC	2000-00	WCGS report	Cap > Dem
299	86X/FTS @ NG00403	Relay	GE	HMA11 (ND-DC NC)	NG004	Switchgear	CB/CC	2000-00	GERS	Functionally Screens
300	42 @ NG004DBF6	Relay	Not Available	Not Available	NG004D	Motor Control Center	DGB	2000-00	WCGS report	Cap > Dem
301	42 @ NG004DDF3	Relay	Not Available	Not Available	NG004D	Motor Control Center	DGB	2000-00	WCGS report	Cap > Dem
302	50G @ NG004DBF6	Relay	Gould	GRM-FC	NG004D	Motor Control Center	DGB	2000-00	GERS	Cap > Dem
303	3XEF55 @ NG005ECF1	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
304	3XEF57 @ NG005ECF1	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
305	42 @ NG005EFF3	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
306	42C @ NG005EDF2	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
307	42C @ NG005EEF3	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
308	42F @ NG005EDF4	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
309	42O @ NG005EDF2	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
310	42O @ NG005EEF3	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
311	42S @ NG005EDF4	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
312	62TDDEF19 @ NG005ECF1	Relay	Agastat	E7022AE004	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
313	CRF @ NG005EDF4	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
314	CRS @ NG005EDF4	Relay	Not Available	Not Available	NG005E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
315	3XEF56 @ NG006ECF1	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
316	3XEF58 @ NG006ECF1	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
317	42 @ NG006EFF3	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
318	42C @ NG006EDF2	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
319	42C @ NG006EEF3	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
320	42F @ NG006EDF4	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
321	42O @ NG006EDF2	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
322	42O @ NG006EEF3	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
323	42S @ NG006EDF4	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
324	62TDDEF20 @ NG006ECF1	Relay	Agastat	E7022AE004	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
325	CRF @ NG006EDF4	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
326	CRS @ NG006EDF4	Relay	Not Available	Not Available	NG006E	Motor Control Center	ESW	2000-00	WCGS report	Cap > Dem
327	ABHS0001 2/4 @ RP053AB	Relay	Foxboro Company	2AX+DSR	RP053A	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
328	ALHS0006 2/3 @ RP053AB	Relay	Foxboro Company	2AX+DSR	RP053A	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
329	ALHS0008 2/3 @ RP053AB	Relay	Foxboro Company	2AX+DSR	RP053A	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
330	GMTSL0001 @ RP053AC	Relay	Foxboro Company	2AO-L2C-R	RP053A	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
331	JELSH0001B @ RP053AC	Relay	Foxboro Company	2AO-L2C-R	RP053A	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
332	JELSL0001C @ RP053AC	Relay	Foxboro Company	2AO-L2C-R	RP053A	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
333	ABHS0004 3/5 @ RP053BB	Relay	Foxboro Company	2AX+DSR	RP053B	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
334	ALHS0012 2/3 @ RP053BB	Relay	Foxboro Company	2AX+DSR	RP053B	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
335	GMTSL0011 @ RP053BC	Relay	Foxboro Company	2AO-L2C-R	RP053B	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
336	JELSH0021B @ RP053BC	Relay	Foxboro Company	2AO-L2C-R	RP053B	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
337	JELSL0021C @ RP053BC	Relay	Foxboro Company	2AO-L2C-R	RP053B	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
338	ABHS0002 3/6 @ RP053DA	Relay	Foxboro Company	2AX+DSR	RP053D	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
339	ABHS0003 2/3 @ RP053DB	Relay	Foxboro Company	2AX+DSR	RP053D	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
340	FCHS0313 3/3 @ RP053DA	Relay	Foxboro Company	2AX+DSR	RP053D	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
341	1XEF31 @ RP139	Relay	Struthers & Dunn	219BBX221 (ND, NO)	RP139	Control Cabinet	CB	2000-00	EPRI NP-7147	Cap > Dem
342	1XEF33 @ RP139	Relay	Struthers & Dunn	219BBX221 (NE, NO)	RP139	Control Cabinet	CB	2000-00	GERS	Cap > Dem
343	1XEF35 @ RP139	Relay	Struthers & Dunn	219BBX221 (ND, NO)	RP139	Control Cabinet	CB	2000-00	EPRI NP-7147	Cap > Dem
344	62XBB001 @ RP139	Relay	Agastat	E7022AB (ND,ALL)	RP139	Control Cabinet	CB	2000-00	GERS	Functionally Screens
345	62XBB003 @ RP139	Relay	Agastat	E7022AB (ND,ALL)	RP139	Control Cabinet	CB	2000-00	GERS	Functionally Screens
346	1XEF32 @ RP140	Relay	Struthers & Dunn	219BBX221 (ND, NO)	RP140	Control Cabinet	CB	2000-00	EPRI NP-7147	Cap > Dem
347	1XEF34 @ RP140	Relay	Struthers & Dunn	219BBX221 (NE, NO)	RP140	Control Cabinet	CB	2000-00	GERS	Cap > Dem
348	1XEF36 @ RP140	Relay	Struthers & Dunn	219BBX221 (ND, NO)	RP140	Control Cabinet	CB	2000-00	EPRI NP-7147	Cap > Dem
349	62XBB002 @ RP140	Relay	Agastat	7022 (ND, ALL)	RP140	Control Cabinet	CB	2000-00	GERS	Functionally Screens
350	62XBB004 @ RP140	Relay	Agastat	7022 (ND, ALL)	RP140	Control Cabinet	CB	2000-00	GERS	Functionally Screens
351	ABHS0002 2/6 @ RP147A	Relay	Foxboro Company	2AX+DSR	RP147A	Control Cabinet	CB	2000-00	WCGS report	Cap > Dem
352	FCHS0313 2/3 @ RP147A	Relay	Foxboro Company	2AX+DSR	RP147A	Control Cabinet	CB	2000-00	WCGS report	Cap > Dem
353	ABHS0004 2/5 @ RP147B	Relay	Foxboro Company	2AX+DSR	RP147B	Control Cabinet	CB	2000-00	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
354	ALHS0010 2/3 @ RP147B	Relay	Foxboro Company	2AX+DSR	RP147B	Control Cabinet	CB	2000-00	WCGS report	Cap > Dem
355	3XSJ01 @ RP209	Relay	Struthers & Dunn	219FXX114NE (ND, NO)	RP209	Control Cabinet	AUX	2000-00	GERS	Functionally Screens
356	3XSJ03 @ RP209	Relay	Struthers & Dunn	219DXB119NE (ND, NO)	RP209	Control Cabinet	AUX	2000-00	GERS	Functionally Screens
357	3XSJ05 @ RP209	Relay	Struthers & Dunn	219DXB119NE (NE, NC)	RP209	Control Cabinet	AUX	2000-00	GERS	Cap > Dem
358	3XSJ02 @ RP210	Relay	Struthers & Dunn	219FXX114 (ND, NO)	RP210	Control Cabinet	AUX	2026-00	GERS	Functionally Screens
359	3XSJ04 @ RP210	Relay	Struthers & Dunn	219DXB119 (ND, NO)	RP210	Control Cabinet	AUX	2026-00	GERS	Functionally Screens
360	3XSJ06 @ RP210	Relay	Struthers & Dunn	219DXB119NE (NE, NC)	RP210	Control Cabinet	AUX	2026-00	GERS	Cap > Dem
361	45XJE01 @ RP330	Relay	Struthers & Dunn	219BBX221NE (ND, NC)	RP330	Control Cabinet	AUX	2000-00	GERS	Functionally Screens
362	45XJE02 @ RP331	Relay	Struthers & Dunn	219BBX221NE (ND, NC)	RP331	Control Cabinet	AUX	2026-00	GERS	Functionally Screens
363	3XSJ25 @ RP332	Relay	Struthers & Dunn	219DXB119 (ND, NC)	RP332	Control Cabinet	AUX	2000-00	GERS	Requires Resolution
364	3XSJ27 @ RP332	Relay	Struthers & Dunn	219DXB119NE (NE, NO)	RP332	Control Cabinet	AUX	2000-00	GERS	Cap > Dem
365	3XSJ31 @ RP332	Relay	Struthers & Dunn	219FXX114 (ND, NO)	RP332	Control Cabinet	AUX	2000-00	GERS	Functionally Screens
366	3XSJ33 @ RP332	Relay	Struthers & Dunn	219DXB119NE (ND, NC)	RP332	Control Cabinet	AUX	2000-00	GERS	Requires Resolution
367	3XSJ35 @ RP332	Relay	Struthers & Dunn	219DXB119NE (NE, NO)	RP332	Control Cabinet	AUX	2000-00	GERS	Cap > Dem
368	62TDENB01 @ RP332	Relay	Struthers & Dunn	236ABX139-NE	RP332	Control Cabinet	AUX	2000-00	SQURTS test	Functionally Screens
369	62TDENB02 @ RP332	Relay	Struthers & Dunn	236ABX139-NE	RP332	Control Cabinet	AUX	2000-00	SQURTS test	Functionally Screens

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
370	3XSJ26 @ RP333	Relay	Struthers & Dunn	219DXB119 (ND, NC)	RP333	Control Cabinet	AUX	2026-00	GERS	Requires Resolution
371	3XSJ28 @ RP333	Relay	Struthers & Dunn	219DXB119NE (NE, NO)	RP333	Control Cabinet	AUX	2026-00	GERS	Cap > Dem
372	3XSJ32 @ RP333	Relay	Struthers & Dunn	219FXX114 (ND, NO)	RP333	Control Cabinet	AUX	2026-00	GERS	Functionally Screens
373	3XSJ34 @ RP333	Relay	Struthers & Dunn	219DXB119NE (ND, NC)	RP333	Control Cabinet	AUX	2026-00	GERS	Requires Resolution
374	3XSJ36 @ RP333	Relay	Struthers & Dunn	219DXB119NE (NE, NO)	RP333	Control Cabinet	AUX	2026-00	GERS	Cap > Dem
375	62TDENB03 @ RP333	Relay	Struthers & Dunn	236ABX139-NE	RP333	Control Cabinet	AUX	2026-00	SQURTS test	Functionally Screens
376	62TDENB04 @ RP333	Relay	Struthers & Dunn	236ABX139-NE	RP333	Control Cabinet	AUX	2026-00	SQURTS test	Functionally Screens
377	86XRP1 @ RP334	Relay	Electroswitch	7828GD	RP334	Control Cabinet	CB	2000-00	Vendor report	Cap > Dem
378	86XRP2 @ RP334	Relay	Electroswitch	7828GD	RP334	Control Cabinet	CB	2000-00	Vendor report	Cap > Dem
379	86XRP3 @ RP334	Relay	Electroswitch	7828GD	RP334	Control Cabinet	CB	2000-00	Vendor report	Cap > Dem
380	K122 @ SA036A	Relay	Struthers & Dunn	219 Series (ND, NO)	SA036A	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
381	K142 @ SA036A	Relay	Struthers & Dunn	219 Series (ND, NO)	SA036A	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
382	K151 @ SA036B	Relay	Struthers & Dunn	219 Series (ND, NO)	SA036B	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
383	K101 @ SA036C	Relay	Struthers & Dunn	219 Series (ND, NC)	SA036C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
384	K102 @ SA036C	Relay	Struthers & Dunn	219 Series (ND, NC)	SA036C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
385	K103 @ SA036C	Relay	Struthers & Dunn	219 Series (ND, NO)	SA036C	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
386	K118 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
387	K119 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
388	K131 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
389	K133 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
390	K134 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
391	K137 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
392	K141 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
393	K154 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
394	K156 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
395	K161 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
396	K201 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
397	K203 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
398	K204 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
399	K216 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
400	K217 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
401	K224 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
402	K247 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
403	K248 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
404	K256 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
405	K317 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
406	K318 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
407	K324 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
408	K329 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
409	K330 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
410	K344 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
411	K356 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
412	K417 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
413	K418 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
414	K429 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
415	K430 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
416	K435 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
417	K444 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
418	K456 @ SB029A	Relay	Midtex/Aemco	156-14C300	SB029A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
419	K505 @ SB029C	Relay	Midtex/Aemco	156-14D200	SB029C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
420	K519 @ SB029C	Relay	Midtex/Aemco	156-14D200	SB029C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
421	K521 @ SB029C	Relay	Midtex/Aemco	156-14D200	SB029C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
422	K522 @ SB029C	Relay	Midtex/Aemco	156-14D200	SB029C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
423	K525 @ SB029C	Relay	Midtex/Aemco	156-14D200	SB029C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
424	K526 @ SB029C	Relay	Midtex/Aemco	156-14D200	SB029C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
425	K527 @ SB029C	Relay	Midtex/Aemco	156-14D200	SB029C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
426	K602 @ SB029C	Relay	Potter & Brumfield	MDR 4103-1	SB029C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
427	K609 @ SB029C	Relay	Potter & Brumfield	MDR 4103-1	SB029C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
428	K615 @ SB029C	Relay	Potter & Brumfield	MDR 4103-1	SB029C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
429	K617 @ SB029C	Relay	Potter & Brumfield	MDR 4103-1	SB029C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
430	K629 @ SB029C	Relay	Potter & Brumfield	MDR 4103-1	SB029C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
431	K631 @ SB029C	Relay	Potter & Brumfield	MDR 4103-1	SB029C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
432	K645 @ SB029C	Relay	Potter & Brumfield	MDR 4103-1	SB029C	Control Cabinet	CB/CC	2047-06	SQUG Advisory	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
									2004-02	
433	K713 @ SB029D	Relay	Potter & Brumfield	MDR 4103-1	SB029D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
434	K734 @ SB029D	Relay	Potter & Brumfield	MDR 4103-1	SB029D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
435	K750 @ SB029D	Relay	Potter & Brumfield	MDR 4103-1	SB029D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
436	K751 @ SB029D	Relay	Potter & Brumfield	MDR 4103-1	SB029D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
437	K752 @ SB029D	Relay	Potter & Brumfield	MDR 4103-1	SB029D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
438	K811 @ SB030A	Relay	Potter & Brumfield	MDR 66-4	SB030A	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
439	K118 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
440	K119 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
441	K131 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
442	K133 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
443	K134 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
444	K137 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
445	K141 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
446	K156 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
447	K161 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
448	K201 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
449	K203 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
450	K204 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
451	K216 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
452	K217 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
453	K224 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
454	K247 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
455	K248 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
456	K254 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
457	K256 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
458	K317 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
459	K318 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
460	K324 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
461	K329 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
462	K330 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
463	K344 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
464	K356 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
465	K417 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
466	K418 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
467	K429 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
468	K430 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
469	K435 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
470	K444 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
471	K456 @ SB032A	Relay	Midtex/Aemco	156-14C300	SB032A	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
472	K217 @ SB032C	Relay	Midtex/Aemco	156-14C300	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
473	K330 @ SB032C	Relay	Midtex/Aemco	156-14C300	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
474	K430 @ SB032C	Relay	Midtex/Aemco	156-14C300	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
475	K502 @ SB032C	Relay	Midtex/Aemco	156-14D200	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
476	K505 @ SB032C	Relay	Midtex/Aemco	156-14D200	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
477	K519 @ SB032C	Relay	Midtex/Aemco	156-14D200	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
478	K521 @ SB032C	Relay	Midtex/Aemco	156-14D200	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
479	K522 @ SB032C	Relay	Midtex/Aemco	156-14D200	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
480	K525 @ SB032C	Relay	Midtex/Aemco	156-14D200	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
481	K526 @ SB032C	Relay	Midtex/Aemco	156-14D200	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
482	K527 @ SB032C	Relay	Midtex/Aemco	156-14D200	SB032C	Control Cabinet	CB/CC	2047-06	GERS	Cap > Dem
483	K602 @ SB032C	Relay	Potter & Brumfield	MDR 4103-1	SB032C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
484	K609 @ SB032C	Relay	Potter & Brumfield	MDR 4103-1	SB032C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
485	K615 @ SB032C	Relay	Potter & Brumfield	MDR 4103-1	SB032C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
486	K617 @ SB032C	Relay	Potter & Brumfield	MDR 4103-1	SB032C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
487	K629 @ SB032C	Relay	Potter & Brumfield	MDR 4103-1	SB032C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
488	K630 @ SB032C	Relay	Potter & Brumfield	MDR 4103-1	SB032C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
489	K631 @ SB032C	Relay	Potter & Brumfield	MDR 4103-1	SB032C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
490	K645 @ SB032C	Relay	Potter & Brumfield	MDR 4103-1	SB032C	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
491	K713 @ SB032D	Relay	Potter & Brumfield	MDR 4103-1	SB032D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
492	K734 @ SB032D	Relay	Potter & Brumfield	MDR 4103-1	SB032D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
493	K750 @ SB032D	Relay	Potter & Brumfield	MDR 4103-1	SB032D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
494	K751 @ SB032D	Relay	Potter & Brumfield	MDR 4103-1	SB032D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
495	K752 @ SB032D	Relay	Potter & Brumfield	MDR 4103-1	SB032D	Control Cabinet	CB/CC	2047-06	SQUG Advisory 2004-02	Cap > Dem
496	K811 @ SB033A	Relay	Potter & Brumfield	MDR 66-4	SB033A	Control Cabinet	CB	2047-06	WCGS report	Cap > Dem
497	PS/457D @ SB037	Relay	Westinghouse	739B194H01	SB037	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
498	PS/457E @ SB037	Relay	Westinghouse	739B194H01	SB037	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
499	PS/526A @ SB037	Relay	Westinghouse	739B194H01	SB037	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
500	PS/536A @ SB037	Relay	Westinghouse	739B194H01	SB037	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
501	PS/935A @ SB037	Relay	Westinghouse	739B194H01	SB037	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
502	PS/935B @ SB037	Relay	Westinghouse	739B194H01	SB037	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
503	PS/405A @ SB038	Relay	Westinghouse	739B194H01	SB038	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
504	PS/405E @ SB038	Relay	Westinghouse	739B194H01	SB038	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
505	PS/455D @ SB038	Relay	Westinghouse	739B194H01	SB038	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
506	PS/455E @ SB038	Relay	Westinghouse	739B194H01	SB038	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
507	PS/514A @ SB038	Relay	Westinghouse	739B194H01	SB038	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation										
No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
508	PS/524A @ SB038	Relay	Westinghouse	739B194H01	SB038	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
509	PS/534A @ SB038	Relay	Westinghouse	739B194H01	SB038	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
510	PS/544A @ SB038	Relay	Westinghouse	739B194H01	SB038	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
511	PS/937A @ SB038	Relay	Westinghouse	739B194H01	SB038	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
512	PS/458D @ SB041	Relay	Westinghouse	739B194H01	SB041	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
513	PS/458E @ SB041	Relay	Westinghouse	739B194H01	SB041	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
514	PS/516A @ SB041	Relay	Westinghouse	739B194H01	SB041	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
515	PS/546A @ SB041	Relay	Westinghouse	739B194H01	SB041	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
516	PS/934A @ SB041	Relay	Westinghouse	739B194H01	SB041	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
517	PS/934B @ SB041	Relay	Westinghouse	739B194H01	SB041	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
518	PS/403A @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
519	PS/403E @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
520	PS/456D @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
521	PS/456E @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
522	PS/515A @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
523	PS/525A @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem

Table B-1 Components Identified for High Frequency Confirmation

No.	Component				Enclosure		Building	Floor Elev. (ft)	Component Evaluation	
	Device ID	Type	Manufacturer	Model	ID	Type			Basis for Capacity	Evaluation Result
524	PS/535A @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
525	PS/545A @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
526	PS/936A @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem
527	PS/936B @ SB042	Relay	Westinghouse	739B194H01	SB042	Control Cabinet	CB/CC	2047-06	WCGS report	Cap > Dem