

Insulation Resistance (Megger) Test Report Canadian Coast Guard CCGS Samuel Risley

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|------------------|---------------------------|----------------|----------------------|
| Canal Project No | 10008301 | Owner | Canadian Coast Guard |
| Testing Dates | 10/29 /2018 to 11/01/2018 | Installation | CCGS Samuel Risley |
| Location | Parry Sound, ON | Name of Tester | Geordie Wall |
| Instrument Type | Fluke 1587 | Instrument ID | E&I 064 |

| Revision Log | | | | | |
|--------------|--------------------------------|-----------------|--------------|-------------------|-------------|
| Rev | Description | Date (dd/mm/yy) | Prepared by | Reviewed by | Approved by |
| B | Preliminary Release for Review | 11/15/2018 | Eric Booth | Donald MacNearney | |
| 1 | As Completed onboard | 11/1/2018 | Geordie Wall | Eric Booth | |
| | | | | | |

Canadian Coast Guard

Parry Sound, ON

| Report Notes |
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| Note 1) All 3 Phase (3Ø) measurements are recorded as the lowest of the 3 phases at the time of test |
| Note 2) All 1 Phase (1Ø) measurements are recorded as the lowest of the conductors at the time of test |
| Note 3) All DC measurements are recorded as the lowest of the Positive and Negative |
| Note 4) All readings taken with 110-550V Megger unless stated otherwise |
| Note 5) Recording of; 50V Test at 55 MΩ indicates a value greater than (>) 55MΩ (Top of Meter Scale) 110V Tests at 110 MΩ indicates a value greater than (>) 110MΩ (Top of Meter Scale) 250V Test at 275 MΩ indicates a value greater than (>) 275MΩ (Top of Meter Scale) 500V Test at 550 MΩ indicates a value greater than (>) 550MΩ (Top of Meter Scale) |
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Shaft Generators, Ship Service Generators & Shore Connection

Dwg Ref: 161-603-2 of 8
161-603-3 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. In order to avoid damage to equipment slowly rotate Megger about ¼ turn. A low ohm reading indicates the presence of a load on the circuit. **DISCONNECT** the load before continuing to crank the Megger or damage may result!

Canadian Coast Guard

Shaft Generator #1

| | | | | | | | |
|----------------|-------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | ound, ON | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | | Phase 1 to Ground | 800M | 1G | 1G | 5GΩ | 2GΩ |
| Frequency 60Hz | | Phase 2 to Ground | 800M | 1G | 1G | 5GΩ | 2GΩ |
| Power 1000kW | Cable: | Phase 3 to Ground | 800M | 1G | 1G | 5GΩ | 2GΩ |
| Amperage 1324A | | Phase 1 to Phase 2 | N/A | 1G | 1G | 5GΩ | 2GΩ |
| Phase 3 | | Phase 1 to Phase 3 | N/A | 1G | 1G | 5GΩ | 2GΩ |
| Cable 3x1c#750 | | Phase 2 to Phase 3 | N/A | 1G | 1G | 5GΩ | 2GΩ |
| | Generator: | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | | Phase 1 to Ground | 800M | 1G | 1G | 5GΩ | 2GΩ |
| | | Phase 2 to Ground | 800M | 1G | 1G | 5GΩ | 2GΩ |
| | | Phase 3 to Ground | 800M | 1G | 1G | 5GΩ | 2GΩ |

Shaft Generator #2

| | | | | | | | |
|----------------|-------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | | Phase 1 to Ground | 800M | 1G | 1G | 5GΩ | 11GΩ |
| Frequency 60Hz | | Phase 2 to Ground | 800M | 1G | 1G | 5GΩ | 11GΩ |
| Power 1000kW | Cable: | Phase 3 to Ground | 800M | 1G | 1G | 5GΩ | 11GΩ |
| Amperage 1324A | | Phase 1 to Phase 2 | N/A | 1G | 1G | 5GΩ | 11GΩ |
| Phase 3 | | Phase 1 to Phase 3 | N/A | 1G | 1G | 5GΩ | 11GΩ |
| Cable 3x1c#750 | | Phase 2 to Phase 3 | N/A | 1G | 1G | 5GΩ | 11GΩ |
| | Generator: | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | | Phase 1 to Ground | 800M | 1G | 1G | 5GΩ | 5GΩ |
| | | Phase 2 to Ground | 800M | 1G | 1G | 5GΩ | 5GΩ |
| | | Phase 3 to Ground | 800M | 1G | 1G | 5GΩ | 5GΩ |

Ship Service Generator #1

| | | | | | | | |
|----------------|---------------|--------------------|----------|-----------|-----------|--|-----------|
| Specs: | | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | | 11/1/2018 |
| Volts 600VAC | | Phase 1 to Ground | 700M | 1G | 1G | | 5GΩ |
| Frequency 60Hz | | Phase 2 to Ground | 500M | 1G | 1G | | 5GΩ |
| Power 395kW | Cable: | Phase 3 to Ground | 500M | 1G | 1G | | 5GΩ |
| Amperage 524A | | Phase 1 to Phase 2 | N/A | 1G | 1G | | 5GΩ |

| | | | | | | |
|---------------------------|--|----------|-----------|-----------|--|-----------|
| Phase 3 Cable 3x1c#4/0 | Phase 1 to Phase 3 Phase 2 to Phase 3 | N/A | 1G | 1G | | 5GΩ |
| | | N/A | 1G | 1G | | 5GΩ |
| Generator: | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | | 11/1/2018 |
| | Phase 1 to Ground | 720M | 1G | | | 5GΩ |
| | Phase 2 to Ground | 720M | 1G | | | 5GΩ |
| | Phase 3 to Ground | 720M | 1G | | | 5GΩ |

Ship Service Generator #2

| | | | | | | | |
|--|-------------------|--------------------|-----------|-----------|-----------|--|-----------|
| Specs: Volts 600VAC Frequency 60Hz Power 395kW Amperage 524A Phase 3 Cable 3x1c#4/0 | Cable: | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | | 11/1/2018 |
| | | Phase 1 to Ground | 1.7G | 1G | 1G | | 5GΩ |
| | | Phase 2 to Ground | 1.4G | 1G | 1G | | 5GΩ |
| | | Phase 3 to Ground | 1.2G | 1G | 1G | | 5GΩ |
| | | Phase 1 to Phase 2 | N/A | 1G | 1G | | 5GΩ |
| | | Phase 1 to Phase 3 | N/A | 1G | 1G | | 5GΩ |
| | | Phase 2 to Phase 3 | N/A | 1G | 1G | | 5GΩ |
| | | | | | | | |
| Generator: | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | | | 11/1/2018 |
| | Phase 1 to Ground | 1.7G | 1G | | | | 5GΩ |
| | Phase 2 to Ground | 1.4G | 1G | | | | 5GΩ |
| | Phase 3 to Ground | 1.2G | 1G | | | | 5GΩ |

Emergency Generator

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|--|-------------------|--------------------|-----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600VAC Frequency 60Hz Power 140kW Amperage 186A Phase 3 Cable 3x1c#1/0 | Cable: | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | | Phase 1 to Ground | 1.5G | 2G | 2G | 3.8GΩ | 2.2GΩ |
| | | Phase 2 to Ground | 1.5G | 2G | 2G | 3.8GΩ | 2.2GΩ |
| | | Phase 3 to Ground | 1.5G | 2G | 2G | 3.8GΩ | 2.2GΩ |
| | | Phase 1 to Phase 2 | N/A | 2G | 2G | 3.8GΩ | 2.2GΩ |
| | | Phase 1 to Phase 3 | N/A | 2G | 2G | 3.8GΩ | 2.2GΩ |
| | | Phase 2 to Phase 3 | N/A | 2G | 2G | 3.8GΩ | 2.2GΩ |
| | | | | | | | |
| Generator: | Date of Test | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | | 11/1/2018 |
| | Phase 1 to Ground | 1.5G | 2G | 2G | 3.8GΩ | | 2.2GΩ |
| | Phase 2 to Ground | 1.5G | 2G | 2G | 3.8GΩ | | 2.2GΩ |
| | Phase 3 to Ground | 1.5G | 2G | 2G | 3.8GΩ | | 2.2GΩ |

Shore Connection

| | | | | | | | |
|--|---------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600VAC Frequency 60Hz Power 500kW Amperage 482A Phase 3 Cable 3x1c#4/0 | Primary Side | Date of Test | 9/7/2011 | 1/3/2013 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | | Phase 1 to Ground | 400M | 440M | 440M | 569GΩ | 2.2GΩ |
| | | Phase 2 to Ground | 400M | 420M | 440M | 569GΩ | 2.2GΩ |
| | | Phase 3 to Ground | 400M | 480M | 440M | 569GΩ | 2.2GΩ |
| | | Phase 1 to Phase 2 | N/A | | | | |
| | | Phase 1 to Phase 3 | N/A | | | | |
| | | Phase 2 to Phase 3 | N/A | | | | |
| | | | | | | | |
| Secondary Side | Date of Test | 9/7/2011 | 1/3/2013 | 8/17/2013 | 9/21/2017 | | 11/1/2018 |
| | Phase 1 to Ground | 500M | 4G | 4G | 5GΩ | | 2.2GΩ |
| | Phase 2 to Ground | 500M | 4G | 4G | 5GΩ | | 2.2GΩ |
| | Phase 3 to Ground | 500M | 4G | 4G | 5GΩ | | 2.2GΩ |

| Shore Power Cable - Dockside | Date of Test | 9/7/2011 | 1/3/2013 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------------------|-------------------|----------|----------|-----------|-----------|-----------|
| | Phase 1 to Ground | N/A | N/A | N/A | N/A | 238MΩ |
| | Phase 2 to Ground | N/A | N/A | N/A | N/A | 238MΩ |
| | Phase 3 to Ground | N/A | N/A | N/A | N/A | 238MΩ |
| | | | | | | |

Ship Service Switchboard

Dwg Ref: 161-603-3 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. In order to avoid damage to equipment slowly rotate Megger about ¼ turn. A low ohm reading indicates the presence of a load on the circuit. **DISCONNECT** the load before continuing to crank the Megger or damage may result!

Note: After completion of readings, give to Chief Engineer for spreadsheet updating. Canadian Coast Guard
Note: remove fuses under syncro compartment to clear ground detection circuit.

Parry Sound, ON

Emergency Bus Feeder

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|---------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Amps 209 amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| HP | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Cable Size 2x3C#1/0 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| Breaker # M1 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| Test Results | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |

600 Volt Non-Essential MCC #1 Bus Feeder

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Amps 173 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| HP | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Cable Size 3C#3/0 | Phase 1 to Phase 2 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Breaker # M2 | Phase 1 to Phase 3 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |

600 Volt Semi-Essential MCC #2 Bus Feeder

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Amps 159 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| HP | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Cable Size 3C#3/0 | Phase 1 to Phase 2 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |

| | | | | | | |
|--------------|--------------------|-----|-----|-----|------|-------|
| Breaker # M3 | Phase 1 to Phase 3 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |

120 Volt Semi-Essential distribution Centre Bus Feeder

Specs:

| | | | | | | |
|-----------|-------------------|----------|-----------|-----------|-----------|-----------|
| Primary | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| 600 VAC | Phase 1 to Ground | 6G | 5G | 5G | 11GΩ | 2.2GΩ |
| 108 Amps | Phase 2 to Ground | 6G | 5G | 5G | 11GΩ | 2.2GΩ |
| 112.5 kVA | Phase 3 to Ground | 6G | 5G | 5G | 11GΩ | 2.2GΩ |
| 3C#1/0 | | | | | | |
| M4 | | | | | | |

| | | | | | | |
|-----------|-------------------|----------|-----------|-----------|-----------|-----------|
| Secondary | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| 120 VAC | Phase 1 to Ground | 6G | 5G | 5G | 11GΩ | 2.2GΩ |
| 524A | Phase 2 to Ground | 6G | 5G | 5G | 11GΩ | 2.2GΩ |
| 3x3C#3/0 | Phase 3 to Ground | 6G | 5G | 5G | 11GΩ | 2.2GΩ |

240 Volt Non-Essential Distribution Centre #1 Bus Feeder

Specs:

Primary

600 VAC

217 Amps

225 kVA

3C#2/0

M5

Secondary

240 VAC

542A

3x3C#3/0

Note: Remove ground detection fuses & isolate voltmeter at secondary MCC

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-------------------|----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 9G | 11G | 11G | 11GΩ | 2.2GΩ |
| Phase 2 to Ground | 9G | 11G | 11G | 11GΩ | 2.2GΩ |
| Phase 3 to Ground | 9G | 11G | 11G | 11GΩ | 2.2GΩ |

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-------------------|----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 9G | 11G | 11G | 11GΩ | 2.2GΩ |
| Phase 2 to Ground | 9G | 11G | 11G | 11GΩ | 2.2GΩ |
| Phase 3 to Ground | 9G | 11G | 11G | 11GΩ | 2.2GΩ |

600 Volt Semi-Essential MCC #1 Bus Feeder

| | | | | | | | |
|-------------------|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Amps 146 Amps | | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| HP | | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Cable Size 3C#2/0 | | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| Breaker # M6 | | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |

M7 Spare Bus Feeder (for Future Expansion)

600 Volt Non-Essential MCC #3 Bus Feeder

| | | | | | | | |
|---------------------|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | | Phase 1 to Ground | 5.6G | 3.5G | 4G | 11GΩ | 2.2GΩ |
| Amps 200 Amps | | Phase 2 to Ground | 5.6G | 3.5G | 4G | 11GΩ | 2.2GΩ |
| HP | | Phase 3 to Ground | 5.6G | 3.5G | 4G | 11GΩ | 2.2GΩ |
| Cable Size 2x3C#1/0 | | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| Breaker # M8 | | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |

Steering Gear Pump #2 Port (System #1)

| | | | | | | |
|--|--------------------|-----------|----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 17 Amps HP Cable Size 3C#12 Breaker # M9 | Date | 0709/2011 | 1/3/2013 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 2.8G | 4G | 4G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 2.8G | 4G | 4G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 2.8G | 4G | 4G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 2 | N/A | N/A | | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 3 | N/A | N/A | | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | N/A | N/A | | 11GΩ | 2.2GΩ |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 4G | 4G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 11G | 4G | 4G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 11G | 4G | 4G | 11GΩ | 2.2GΩ |

Steering Gear Pump #4 Stbd (System #2)

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 17 Amps HP Cable Size 3C#12 Breaker # M10 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 2.8G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 2.8G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 2.8G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 3G | 3G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 11G | 3G | 3G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 11G | 3G | 3G | 11GΩ | 2.2GΩ |

240 Volt Non-Essential Distribution Centre #2 Bus Feeder

Note: Remove Ground Detection Fuse
Shut Off Volt Meter at MCC for Secondary

| | | | | | | |
|---|-------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Primary Volts 600 VAC Amps 72 Amps HP 75 kVA Cable Size 3C#2 Breaker # M11 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 2GΩ | 2.2GΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 2GΩ | 2.2GΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 2GΩ | 2.2GΩ |

| | | | | | | |
|---|-------------------|----------|-----------|-----------|-----------|-----------|
| Secondary Volts 240 VAC Amps 180 Amps HP Cable Size 3C#4/0 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 550M | 5G | 5G | 550MΩ | 550MΩ |
| | Phase 2 to Ground | 550M | 5G | 5G | 550MΩ | 550MΩ |
| | Phase 3 to Ground | 550M | 5G | 5G | 550MΩ | 550MΩ |

600 Volt Non-Essential MCC #2 Bus Feeder

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 215 Amps HP Cable Size 2x3C#1/0 Breaker # M12 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 2.2GΩ |

600 Volt Essential MCC #1 Bus Feeder

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 223 Amps HP Cable Size 2x3C#1/0 Breaker # M13 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 2 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 3 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |

600 Volt Essential MCC #2 Bus Feeder

| | | | | | | |
|---|--------------------|-----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 230 Amps HP Cable Size 2x3C#1/0 Breaker # M14 | Date | 07/092011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 2 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 3 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | 11G | 11G | 11G | 11GΩ | 2.2GΩ |

600 Volt Shaft Generator MCC Bus Feeder

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 995 Amps HP Cable Size 2x1C#750 Breaker # M15 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 2.2G | 2G | 2G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 2.2G | 2G | 2G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 2.2G | 2G | 2G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 2 | 2.2G | 2G | 2G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 3 | 2.2G | 2G | 2G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | 2.2G | 2G | 2G | 11GΩ | 2.2GΩ |

600 Volt Emergency MCC Bus Feeder

| | | | | | | |
|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 175 Amps HP Cable Size 2x3C#2/0 Breaker # E5 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 11G | 5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 11G | 5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 2 | N/A | 5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 3 | N/A | 5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | N/A | 5G | 5G | 11GΩ | 2.2GΩ |

Steering Gear Pump #1 Port (System #1)

| | | | | | | |
|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 17 Amps HP Cable Size 3C#12 Breaker # E3 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 2.8G | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 2.8G | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 2.8G | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 2 | N/A | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 3 | N/A | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | N/A | 3.5G | 3.5G | 11GΩ | 2.2GΩ |

Motor:

| | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
| Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |

| | | | | | |
|-------------------|-----|-----|-----|------|-------|
| Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 2.2GΩ |
|-------------------|-----|-----|-----|------|-------|

Steering Gear Pump #3 Port (System #2)

Specs:
Volts 600 VAC
Amps 17 Amps
HP
Cable Size 3C#12
Breaker # E4

| | | | | | |
|--------------------|----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 11G | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| Phase 2 to Ground | 11G | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| Phase 3 to Ground | 11G | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| Phase 1 to Phase 2 | N/A | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| Phase 1 to Phase 3 | N/A | 3.5G | 3.5G | 11GΩ | 2.2GΩ |
| Phase 2 to Phase 3 | N/A | 3.5G | 3.5G | 11GΩ | 2.2GΩ |

Motor:

| | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 11G | 2.8G | 3G | 11GΩ | 2.2GΩ |
| Phase 2 to Ground | 11G | 2.8G | 3G | 11GΩ | 2.2GΩ |
| Phase 3 to Ground | 11G | 2.8G | 3G | 11GΩ | 2.2GΩ |

EMERGENCY
120VAC TRANSFORMER

Specs:
Primary
Volts 600 VAC
Amps 43 Amps
HP 45kVA
Cable Size 3C#6
Breaker # E1
Secondary
Volts 120VAC
Amps 217 Amps
HP
Cable Size 2x3C#2/0

| | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 2.8G | 3.5G | 3G | 11GΩ | 2.2GΩ |
| Phase 2 to Ground | 2.8G | 3.5G | 3G | 11GΩ | 2.2GΩ |
| Phase 3 to Ground | 2.8G | 3.5G | 3G | 11GΩ | 2.2GΩ |

| | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 220M | 220M | 220M | 220MΩ | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220MΩ | 220MΩ |
| Phase 3 to Ground | 220M | 220M | 220M | 220MΩ | 220MΩ |

E6 Spare Bus Feeder (For Future Expansion)

600 Volt Essential MCC #2

Dwg Ref: 161-603-4 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. In order to avoid damage to equipment slowly rotate Megger about ¼ turn. A low ohm reading indicates the presence of a load on the circuit. DISCONNECT the load before continuing to crank the Megger or damage may result!

Sewage Handling Pump

Canadian Coast Guard

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|-----------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | Parry Sound, OI | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 2.7 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | 2 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | M13-1 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| Motor: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|------|----------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |

Engine Room Extraction Fan #1 (2-speed)

| Specs: | | Date | 9/7/2011 | 30/082012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|--------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 4.3 & 2 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | 7.5 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 2x3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | M13-2 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | Date | 9/7/2011 | 30/082012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|-------------------|------|----------|-----------|-----------|-----------|-----------|
| Slow Speed | Phase 1 to Ground | | 9G | 11G | 11G | 11G | 550MΩ |
| | Phase 2 to Ground | | 9G | 11G | 11G | 11G | 550MΩ |
| | Phase 3 to Ground | | 9G | 11G | 11G | 11G | 550MΩ |
| High Speed | Phase 1 to Ground | | 9G | 11G | 11G | 11G | 550MΩ |
| | Phase 2 to Ground | | 9G | 11G | 11G | 11G | 550MΩ |
| | Phase 3 to Ground | | 9G | 11G | 11G | 11G | 550MΩ |

Controllable Pitch Propeller Hydraulic Pump #1

| Specs: | | Date | 9/7/2011 | 30/082012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|---------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 1.1GΩ |
| Amps | 48 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 1.1GΩ |
| HP | 50 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 1.1GΩ |
| Cable Size | 3C#4 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 1.1GΩ |
| Breaker # | M13-3 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 1.1GΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 1.1GΩ |

| Motor: | | Date | 9/7/2011 | 30/082012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|------|----------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | | 2.5G | 2.5G | 2.5G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | | 2.5G | 2.5G | 2.5G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | | 2.5G | 2.5G | 2.5G | 11GΩ | 2.2GΩ |

Rescue Boat Miranda Davit Motor #1 - M13-4

| Specs: | | Date | 9/7/2011 | 30/082012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|---------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | 600 VAC | Phase 1 to Ground | 11G | 5G | 5G | 11GΩ | 1.1GΩ |
| Amps | | Phase 2 to Ground | 11G | 5G | 5G | 11GΩ | 1.1GΩ |
| HP | | Phase 3 to Ground | 11G | 5G | 5G | 11GΩ | 1.1GΩ |
| Cable Size | | Phase 1 to Phase 2 | 11G | 5G | 5G | 11GΩ | 1.1GΩ |
| Breaker # | M13-4 | Phase 1 to Phase 3 | 11G | 5G | 5G | 11GΩ | 1.1GΩ |
| | | Phase 2 to Phase 3 | 11G | 5G | 5G | 11GΩ | 1.1GΩ |
| | | Motor 1 -Ground | 105G | 5G | 5G | 56MΩ | 550MΩ |
| | | Motor 2 - Ground | 105G | 5G | 5G | 56MΩ | 550MΩ |
| | | Motor 3 - Ground | 105G | 5G | 5G | 56MΩ | 550MΩ |

Spare

Breaker #

Main Engine Pre-Lube Oil Pump #1 M13-6

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|----------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 3.9 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | 3 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | M13-6 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| Motor: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|------|----------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | | 3G | 3.8G | 3.8G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | 3G | 3.8G | 3.8G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | | 3G | 3.8G | 3.8G | 11GΩ | 550MΩ |

Water Quality Pack M13-7

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|----------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 1.6 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | 1 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | M13-7 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| Cable: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|----------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | 3.5G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 3.5G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 3.5G | 4G | 4G | 11GΩ | 550MΩ |

Air Conditioning Unit #3 (Main Deck) M13-8

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 5G | 5G | 11GΩ | 550MΩ |
| Amps 12.4 Amps | Phase 2 to Ground | 11G | 5G | 5G | 11GΩ | 550MΩ |
| HP 7.5 Hp | Phase 3 to Ground | 11G | 5G | 5G | 11GΩ | 550MΩ |
| Cable Size 3C#12 | Phase 1 to Phase 2 | N/A | 5G | 5G | 11GΩ | 550MΩ |
| Breaker # M13-8 | Phase 1 to Phase 3 | N/A | 5G | 5G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 5G | 5G | 11GΩ | 550MΩ |

| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|----------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | 3.6G | 2.3G | 3G | 2.2GΩ | 550MΩ |
| | Phase 2 to Ground | 3.6G | 2.3G | 3G | 2.2GΩ | 550MΩ |
| | Phase 3 to Ground | 3.6G | 2.3G | 3G | 2.2GΩ | 550MΩ |

Main Engine Raw Water Pump #2 M13-9

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 32 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 30 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#6 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M13-9 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|----------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | 5G | 11G | 11G | 1.6GΩ | 550MΩ |
| | Phase 2 to Ground | 5G | 11G | 11G | 1.6GΩ | 550MΩ |
| | Phase 3 to Ground | 5G | 11G | 11G | 1.6GΩ | 550MΩ |

Lube Oil Purifier #2 M13-10

| Specs: | | Date | | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-------------------------|--------------------|------|--|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | | | SPARE | | 11GΩ | SPARE |
| Amps 6.1 Amps | Phase 2 to Ground | | | SPARE | | 11GΩ | SPARE |
| HP 5 Hp | Phase 3 to Ground | | | SPARE | | 11GΩ | SPARE |
| Cable Size 3C#10 | Phase 1 to Phase 2 | | | SPARE | | 11GΩ | SPARE |
| Breaker # M13-10 | Phase 1 to Phase 3 | | | SPARE | | 11GΩ | SPARE |
| | Phase 2 to Phase 3 | | | SPARE | | 11GΩ | SPARE |

| Motor: | Date | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | SPARE | | NC | NC |
| | Phase 2 to Ground | SPARE | | NC | NC |
| | Phase 3 to Ground | SPARE | | NC | NC |

Main Engine Air Supply Fan #1 (2-speed) M13-11

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|------|----------|-----------|-----------|-----------|-----------|
|--------|------|----------|-----------|-----------|-----------|-----------|

| | | | | | | |
|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC Amps 7.5 Amps HP 7.5 Hp Cable Size 2x3C#14 Breaker # M13-11 | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | | | | | |
| Low Speed | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | N/A | 2.3G | 2G | 2GΩ | 550MΩ |
| | Phase 2 to Ground | N/A | 2.3G | 2G | 2GΩ | 550MΩ |
| High Speed | Phase 3 to Ground | N/A | 2.3G | 2G | 2GΩ | 550MΩ |
| | Phase 1 to Ground | N/A | 3.5G | 4G | 2GΩ | 550MΩ |
| | Phase 2 to Ground | N/A | 3.5G | 4G | 2GΩ | 550MΩ |
| | Phase 3 to Ground | N/A | 3.5G | 4G | 2GΩ | 550MΩ |

Engine Room Supply Fan #2 (2-speed) M13-12

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 8.6 Amps HP 7.5 Hp Cable Size 2x3C#14 Breaker # M13-12 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|-------------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Low Speed | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | N/A | 2.3G | 2.3G | 2GΩ | 550MΩ |
| | Phase 2 to Ground | N/A | 2.3G | 2.3G | 2GΩ | 550MΩ |
| High Speed | Phase 3 to Ground | N/A | 2.3G | 2.3G | 2GΩ | 550MΩ |
| | Phase 1 to Ground | N/A | 3.5G | 3.5G | 2GΩ | 550MΩ |
| | Phase 2 to Ground | N/A | 3.5G | 3.5G | 2GΩ | 550MΩ |
| | Phase 3 to Ground | N/A | 3.5G | 3.5G | 2GΩ | 550MΩ |

Stbd Reduction Gear Standby Lube Oil Pump M13-13

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 11 Amps HP 10 Hp Cable Size 3C#12 Breaker # M13-13 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 2G | 2.5G | 2G | 4.9GΩ | 550MΩ |
| | Phase 2 to Ground | 2G | 2.5G | 2G | 4.9GΩ | 550MΩ |
| | Phase 3 to Ground | 2G | 2.5G | 2G | 4.9GΩ | 550MΩ |

Fuel Oil Transfer Pump #1 M13-14

| | | | | | | |
|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 6.7 Amps HP 5.5 Hp Cable Size 3C#14 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|-------------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Breaker # M13-14 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Date | | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | 3G | 3.8G | 3G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 3G | 3.8G | 3G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 3G | 3.8G | 3G | 11GΩ | 550MΩ |

Fuel Oil Centrifuge #2 M13-15

| | | | | | | | |
|-------------------------|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 6.1 Amps | Phase 2 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 5 Hp | Phase 3 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M13-15 | Phase 1 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Date | | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | 6G | 2G | 2G | 4.2GΩ | 550MΩ |
| | Phase 2 to Ground | 6G | 2G | 2G | 4.2GΩ | 550MΩ |
| | Phase 3 to Ground | 6G | 2G | 2G | 4.2GΩ | 550MΩ |

Air Compressor #2 (Engine Starting) M13-16

| | | | | | | | |
|-------------------------|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | 2G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 20.3 Amps | Phase 2 to Ground | | 2G | 11G | 11G | 11GΩ | 550MΩ |
| HP 15.9 Hp | Phase 3 to Ground | | 2G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#10 | Phase 1 to Phase 2 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M13-16 | Phase 1 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Date | | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | 2G | 5G | 5G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 2G | 5G | 5G | 8.7GΩ | 550MΩ |
| | Phase 3 to Ground | 2G | 5G | 5G | 8.7GΩ | 550MΩ |

600 Volt Essential MCC #1

Dwg Ref: 161-603-4 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. In order to avoid damage to equipment slowly rotate Megger about ¼ turn. A low ohm reading indicates the presence of a load on the circuit. DISCONNECT the load before continuing to crank the Megger or damage may result!

Controllable Pitch Propeller Hydraulic Motor

| | | | | | | | |
|------------|-----------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts | Parry Sound, ON | Phase 1 to Ground | 2.7G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 48 Amps | Phase 2 to Ground | 2.7G | 11G | 11G | 11GΩ | 550MΩ |
| HP | 50 Hp | Phase 3 to Ground | 2.7G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 3C#4 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | M14-1 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | | |
|--------|-------------------|------|----------|-----------|-----------|-----------|-----------|
| | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | | 2.7G | 3.5G | 3G | 3.8GΩ | 550MΩ |
| | Phase 2 to Ground | | 2.7G | 3.5G | 3G | 3.8GΩ | 550MΩ |
| | Phase 3 to Ground | | 2.7G | 3.5G | 3G | 3.8GΩ | 550MΩ |

General Service Pump (M14-2)

| | | | | | | | |
|------------|---------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts | 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 32 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | 30 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 3C#6 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | M14-2 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | | |
|--------|-------------------|------|----------|-----------|-----------|-----------|-----------|
| | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | | 11G | 11G | 11G | 677MΩ | 550MΩ |
| | Phase 2 to Ground | | 11G | 11G | 11G | 677MΩ | 550MΩ |
| | Phase 3 to Ground | | 11G | 11G | 11G | 677MΩ | 550MΩ |

Main Engine Pre-Lube Oil Pump #2

| | | | | | | |
|--------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|------|----------|-----------|-----------|-----------|-----------|

| | | | | | | |
|------------------------|--------------------|------|-----|-----|------|-------|
| Volts 600 VAC | Phase 1 to Ground | 4.5G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 3.9 Amps | Phase 2 to Ground | 4.5G | 11G | 11G | 11GΩ | 550MΩ |
| HP 3 Hp | Phase 3 to Ground | 4.5G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M14-3 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | 4.5G | 5G | 5G | 7.1GΩ | 550MΩ |
| | Phase 2 to Ground | 4.5G | 5G | 5G | 7.1GΩ | 550MΩ |
| | Phase 3 to Ground | 4.5G | 5G | 5G | 7.1GΩ | 550MΩ |

Boiler RTC PUMP

| | | | | | | |
|------------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 1 Amp | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP .5 kW | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M14-4 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |

Lube Oil Purifier #1 SPARE

| | | | | | | |
|------------------------|--------------------|--|-----------|-----------|-----------|-----------|
| Specs: | Date | | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | SPARE | | 11GΩ | SPARE |
| Amps 6.1 Amps | Phase 2 to Ground | | SPARE | | 11GΩ | SPARE |
| HP 5 Hp | Phase 3 to Ground | | SPARE | | 11GΩ | SPARE |
| Cable Size 3C#10 | Phase 1 to Phase 2 | | SPARE | | 11GΩ | SPARE |
| Breaker # M14-5 | Phase 1 to Phase 3 | | SPARE | | 11GΩ | SPARE |
| | Phase 2 to Phase 3 | | SPARE | | 11GΩ | SPARE |

| | | | | | | |
|---------------|-------------------|--|-----------|-----------|-----------|-----------|
| | Date | | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | | SPARE | | 11GΩ | SPARE |
| | Phase 2 to Ground | | SPARE | | 11GΩ | SPARE |
| | Phase 3 to Ground | | SPARE | | 11GΩ | SPARE |

Fuel Oil Transfer Pump #2

| | | | | | | |
|------------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 6.2G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 6.7 Amps | Phase 2 to Ground | 6.2G | 11G | 11G | 11GΩ | 550MΩ |
| HP 5.5 Hp | Phase 3 to Ground | 6.2G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M14-6 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | |
|------|----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------|----------|-----------|-----------|-----------|-----------|

| | | | | | | |
|---------------|-------------------|------|------|------|-------|-------|
| Motor: | Phase 1 to Ground | 6.2G | 4.5G | 4.5G | 7.1GΩ | 550MΩ |
| | Phase 2 to Ground | 6.2G | 4.5G | 4.5G | 7.1GΩ | 550MΩ |
| | Phase 3 to Ground | 6.2G | 4.5G | 4.5G | 7.1GΩ | 550MΩ |

Fuel Oil Centrifuge #1

| | | | | | | | |
|------------------------|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | 7.1G | 11G | 10G | 11GΩ | 550MΩ |
| Amps 6.1 Amps | Phase 2 to Ground | | 7.1G | 11G | 10G | 11GΩ | 550MΩ |
| HP 5 Hp | Phase 3 to Ground | | 7.1G | 11G | 10G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | | N/A | 11G | 10G | 11GΩ | 550MΩ |
| Breaker # M14-7 | Phase 1 to Phase 3 | | N/A | 11G | 10G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | 11G | 10G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 7.1G | 11G | 10G | 1.7GΩ | 550MΩ |
| | Phase 2 to Ground | 7.1G | 11G | 10G | 1.7GΩ | 550MΩ |
| | Phase 3 to Ground | 7.1G | 11G | 10G | 1.7GΩ | 550MΩ |

Foam Pump

| | | | | | | | |
|------------------------|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | 4G | 11G | 11G | SPARE | SPARE |
| Amps 22 Amps | Phase 2 to Ground | | 4G | 11G | 11G | SPARE | SPARE |
| HP 20 Hp | Phase 3 to Ground | | 4G | 11G | 11G | SPARE | SPARE |
| Cable Size 3C#10 | Phase 1 to Phase 2 | | N/A | 11G | 11G | SPARE | SPARE |
| Breaker # M14-8 | Phase 1 to Phase 3 | | N/A | 11G | 11G | SPARE | SPARE |
| | Phase 2 to Phase 3 | | N/A | 11G | 11G | SPARE | SPARE |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 4G | 4.4G | 4G | SPARE | SPARE |
| | Phase 2 to Ground | 4G | 4.4G | 4G | SPARE | SPARE |
| | Phase 3 to Ground | 4G | 4.4G | 4G | SPARE | SPARE |

Spare Breaker (For Future Expansion)

Main Engine Raw Water Pump #1

| | | | | | | | |
|-------------------------|--------------------|------|----------|----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 1/3/2013 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | 5G | 4G | 4G | 11GΩ | 550MΩ |
| Amps 32 Amps | Phase 2 to Ground | | 5G | 4G | 4G | 11GΩ | 550MΩ |
| HP 30 Hp | Phase 3 to Ground | | 5G | 4G | 4G | 11GΩ | 550MΩ |
| Cable Size 3C#6 | Phase 1 to Phase 2 | | N/A | N/A | 4G | 11GΩ | 550MΩ |
| Breaker # M14-10 | Phase 1 to Phase 3 | | N/A | N/A | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | N/A | 4G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|----------|----------|-----------|-----------|-----------|
| Motor: | Date | 9/7/2011 | 1/3/2013 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 5G | 4G | 4G | 931MΩ | 550MΩ |
| | Phase 2 to Ground | 5G | 4G | 4G | 931MΩ | 550MΩ |
| | Phase 3 to Ground | 5G | 4G | 4G | 931MΩ | 550MΩ |

Port Reduction Gear Standby Lube Oil Pump

| | | | | | | |
|---------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|---------------|------|----------|-----------|-----------|-----------|-----------|

| | | | | | | |
|------------------|--------------------|-----|-----|-----|------|-------|
| Volts 600 VAC | Phase 1 to Ground | 6G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 11.7 Amps | Phase 2 to Ground | 6G | 11G | 11G | 11GΩ | 550MΩ |
| HP 8.6 kW | Phase 3 to Ground | 6G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M14-11 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|--------|-------------------|----------|-----------|-----------|-----------|-----------|
| | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | 6G | 2.3G | 2G | 631MΩ | 550MΩ |
| | Phase 2 to Ground | 6G | 2.3G | 2G | 631MΩ | 550MΩ |
| | Phase 3 to Ground | 6G | 2.3G | 2G | 631MΩ | 550MΩ |

Engine Room Extraction Fan #2 (2-speed)

| | | | | | | |
|--------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 4.3 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 7.5 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 2x3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M14-12 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|------------|-------------------|----------|-----------|-----------|-----------|-----------|
| | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Slow Speed | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| High Speed | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |

Sterntube Lube Oil Pump #2

| | | | | | | |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 2.7G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 1.6 Amps | Phase 2 to Ground | 2.7G | 11G | 11G | 11GΩ | 550MΩ |
| HP 1 Hp | Phase 3 to Ground | 2.7G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M14-13 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------|-------------------|----------|-----------|-----------|-----------|-----------|
| | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor A | Phase 1 to Ground | 2.3G | 5G | 5G | 11GΩ | 550MΩ |
| Motor A | Phase 2 to Ground | 2.3G | 5G | 5G | 11GΩ | 550MΩ |
| Motor A | Phase 3 to Ground | 2.3G | 5G | 5G | 11GΩ | 550MΩ |
| Motor B | Phase 1 to Ground | N/A | 5G | 5G | 11GΩ | 550MΩ |
| Motor B | Phase 2 to Ground | N/A | 5G | 5G | 11GΩ | 550MΩ |
| Motor B | Phase 3 to Ground | N/A | 5G | 5G | 11GΩ | 550MΩ |

Engine Room Supply Fan #2 (2-speed)

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 8.5 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|--|--------------------|-----|-----|-----|------|-------|
| HP 7.5 Hp Cable Size 2x3C#14 Breaker # M14-14 | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

Test Results

| | | | | | | |
|------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Slow Speed | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 3.5G | 4G | 1.2GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 3.5G | 4G | 1.2GΩ | 550MΩ |
| High Speed | Phase 3 to Ground | 11G | 3.5G | 4G | 1.2GΩ | 550MΩ |
| | Phase 1 to Ground | 11G | 2.5G | 4G | 1.2GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 2.5G | 4G | 1.2GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 2.5G | 4G | 1.2GΩ | 550MΩ |

Main Engine Air Supply Fan #2 (2-speed)

| | | | | | | |
|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 7.5 Amps HP 7.5 Hp Cable Size 2x3C#14 Breaker # M14-15 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 4.5G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 4.5G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 4.5G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Slow Speed | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 4.5G | 4G | 4G | 689MΩ | 550MΩ |
| | Phase 2 to Ground | 4.5G | 4G | 4G | 689MΩ | 550MΩ |
| High Speed | Phase 3 to Ground | 4.5G | 4G | 4G | 689MΩ | 550MΩ |
| | Phase 1 to Ground | 2.5G | 2.3G | 3G | 1.2GΩ | 550MΩ |
| | Phase 2 to Ground | 2.5G | 2.3G | 3G | 1.2GΩ | 550MΩ |
| | Phase 3 to Ground | 2.5G | 2.3G | 3G | 1.2GΩ | 550MΩ |

600 Volt Shaft Generator MCC

Dwg Ref: 161-603-2 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. In order to avoid damage to equipment slowly rotate Megger about ¼ turn. A low ohm reading indicates the presence of a load on the circuit. DISCONNECT the load before continuing to crank the Megger or damage may result!

Forward Group Hydraulic Pump #1 Canadian Coast Guard

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|----------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | Parry Sound, O | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 76 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | 75 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 3C#2 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | SG-2 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| Motor: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|------|----------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | | 1350M | 2.5G | 3G | 785MΩ | 550MΩ |
| | Phase 2 to Ground | | 1350M | 2.5G | 3G | 785MΩ | 550MΩ |
| | Phase 3 to Ground | | 1350M | 2.5G | 3G | 785MΩ | 550MΩ |

Forward Group Hydraulic Pump #2

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|---------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 76 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | 75 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 3C#2 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | SG-3 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| Motor: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|------|----------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | | 1185M | 1.2G | 2G | 878MΩ | 550MΩ |
| | Phase 2 to Ground | | 1185M | 1.2G | 2G | 878MΩ | 550MΩ |
| | Phase 3 to Ground | | 1185M | 1.2G | 2G | 878MΩ | 550MΩ |

Forward Group Hydraulic Pump #3

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|--|------|----------|-----------|-----------|-----------|-----------|
|--------|--|------|----------|-----------|-----------|-----------|-----------|

| | | | | | | | |
|---|--------------------|-------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC Amps 76 Amps HP 75 Hp Cable Size 3C#2 Breaker # SG-4 | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ | |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ | |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ | |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ | |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ | |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ | |
| | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Motor: | Phase 1 to Ground | 1850M | 1G | 1G | 521MΩ | 550MΩ | |
| | Phase 2 to Ground | 1850M | 1G | 1G | 521MΩ | 550MΩ | |
| | Phase 3 to Ground | 1850M | 1G | 1G | 521MΩ | 550MΩ | |

Towing Winch Cooling Pump

| | | | | | | | |
|---|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 2.1 Amps HP 1.5 Hp Cable Size 3C#14 Breaker # SG-5 | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | | | | | | |
| Motor: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | | 4.5G | 7G | 5G | 3.2GΩ | 550MΩ |
| | Phase 2 to Ground | | 4.5G | 7G | 5G | 3.2GΩ | 550MΩ |
| | Phase 3 to Ground | | 4.5G | 7G | 5G | 3.2GΩ | 550MΩ |

Stern Thruster Servo Pump

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 6.1 Amps HP 5 Hp Cable Size 3C#14 Breaker # SG-6 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 3.4G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 3.4G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 3.4G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 3.4G | 7G | 5G | 9GΩ | 550MΩ |
| | Phase 2 to Ground | 3.4G | 7G | 5G | 9GΩ | 550MΩ |
| | Phase 3 to Ground | 3.4G | 7G | 5G | 9GΩ | 550MΩ |
| | | | | | | |

Bow Thruster Hydraulic Control Pump

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 11 Amps HP 10 Hp Cable Size 3C#14 Breaker # SG-7 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Date | | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |

| | | | | | | |
|---------------|-------------------|------|----|-----|-------|-------|
| Motor: | Phase 1 to Ground | 2.5G | 3G | 2 G | 1.1GΩ | 550MΩ |
| | Phase 2 to Ground | 2.5G | 3G | 2 G | 1.1GΩ | 550MΩ |
| | Phase 3 to Ground | 2.5G | 3G | 2 G | 1.1GΩ | 550MΩ |

Aft Group Hydraulic Pump #1

| | | | | | | | |
|-----------------------|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 76 Amps | Phase 2 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 75 Hp | Phase 3 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#2 | Phase 1 to Phase 2 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # SG-8 | Phase 1 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 2.3G | 3.5G | 3G | 2.1GΩ | 550MΩ |
| | Phase 2 to Ground | 2.3G | 3.5G | 3G | 2.1GΩ | 550MΩ |
| | Phase 3 to Ground | 2.3G | 3.5G | 3G | 2.1GΩ | 550MΩ |

Aft Group Hydraulic Pump #2

| | | | | | | | |
|-----------------------|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 76 Amps | Phase 2 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 75 Hp | Phase 3 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#2 | Phase 1 to Phase 2 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # SG-9 | Phase 1 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 2.9G | 2.5G | 2.5G | 2.4GΩ | 550MΩ |
| | Phase 2 to Ground | 2.9G | 2.5G | 2.5G | 2.4GΩ | 550MΩ |
| | Phase 3 to Ground | 2.9G | 2.5G | 2.5G | 2.4GΩ | 550MΩ |

Towing Winch Hydraulic Pump #1

| | | | | | | | |
|------------------------|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | 1975M | 2.1G | 2G | 328MΩ | 550MΩ |
| Amps 145 Amps | Phase 2 to Ground | | 1975M | 2.1G | 2G | 328MΩ | 550MΩ |
| HP 150 Hp | Phase 3 to Ground | | 1975M | 2.1G | 2G | 328MΩ | 550MΩ |
| Cable Size 3C#4/0 | Phase 1 to Phase 2 | | N/A | 2.1G | 2G | 11GΩ | 550MΩ |
| Breaker # SG-10 | Phase 1 to Phase 3 | | N/A | 2.1G | 2G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | 2.1G | 2G | 11GΩ | 550MΩ |

Towing Winch Hydraulic Pump #2

| | | | | | | | |
|------------------------|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | | 2.5G | 1.8G | 2G | 245MΩ | 550MΩ |
| Amps 145 Amps | Phase 2 to Ground | | 2.5G | 1.8G | 2G | 245MΩ | 550MΩ |
| HP 150 Hp | Phase 3 to Ground | | 2.5G | 1.8G | 2G | 245MΩ | 550MΩ |
| Cable Size 3C#4/0 | Phase 1 to Phase 2 | | N/A | 1.8G | 2G | 11GΩ | 550MΩ |
| Breaker # SG-11 | Phase 1 to Phase 3 | | N/A | 1.8G | 2G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | 1.8G | 2G | 11GΩ | 550MΩ |

Towing Winch Hydraulic Control Pump

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 252MΩ | 550MΩ |
| Amps 22 Amps | Phase 2 to Ground | 11G | 11G | 11G | 252MΩ | 550MΩ |
| HP 20 Hp | Phase 3 to Ground | 11G | 11G | 11G | 252MΩ | 550MΩ |
| Cable Size 3C#10 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # SG-12 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| Motor: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-------------------|------|----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | | 4.6G | 3.3G | 4G | 2GΩ | 550MΩ |
| Phase 2 to Ground | | 4.6G | 3.3G | 4G | 2GΩ | 550MΩ |
| Phase 3 to Ground | | 4.6G | 3.3G | 4G | 2GΩ | 550MΩ |

Buoy Handling Crane

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|---------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 2.5G | 1G | 2G | 4.6GΩ | 550MΩ |
| Amps 366 Amps | Phase 2 to Ground | 2.5G | 1G | 2G | 4.6GΩ | 550MΩ |
| HP | Phase 3 to Ground | 2.5G | 1G | 2G | 4.6GΩ | 550MΩ |
| Cable Size 2x3C#3/0 | Phase 1 to Phase 2 | N/A | 1G | | 11GΩ | 550MΩ |
| Breaker # SG-13 | Phase 1 to Phase 3 | N/A | 1G | | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 1G | | 11GΩ | 550MΩ |

Cargo Hold Heaters

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-----------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Amps | Phase 1 to Ground | 2.4M | 4.1G | 5G | 2.8GΩ | 550MΩ |
| Breaker # SG-16 | Phase 2 to Ground | 2.4M | 4.1G | 5G | 2.8GΩ | 550MΩ |
| | Phase 3 to Ground | 2.4M | 4.1G | 5G | 2.8GΩ | 550MΩ |

Towing Pins Hyd Pump

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-----------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Breaker # SG-15 | Phase 1 to Ground | 5.5G | 3.5G | 3.5G | 4.6GΩ | 550MΩ |
| | Phase 2 to Ground | 5.5G | 3.5G | 3.5G | 4.6GΩ | 550MΩ |
| | Phase 3 to Ground | 5.5G | 3.5G | 3.5G | 4.6GΩ | 550MΩ |

Stern Thruster Breaker

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-----------|-------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 | Phase 1 to Ground | 530M | 100M | 100M | 11GΩ | 2.2GΩ |
| Breaker # | Phase 2 to Ground | 530M | 100M | 100M | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 530M | 100M | 100M | 11GΩ | 2.2GΩ |

| Motor | Date | | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-------|-------------------|------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | 530M | 100M | 50M | 2GΩ | 2.2GΩ |
| | Phase 2 to Ground | 530M | 100M | 50M | 2GΩ | 2.2GΩ |
| | Phase 3 to Ground | 530M | 100M | 50M | 2GΩ | 2.2GΩ |

600 Volt Emergency MCC

Dwg Ref: 161-603-4 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. DISCONNECT the load before continuing to crank the Megger or damage may result!

Ice Breaking Siren Compressor Motor Canadian Coast Guard

| | | | | | | | |
|------------------|-----------------|-------------------|----------|------------|-----------|-----------|-----------|
| Specs: | Parry Sound, O | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Volts 600 VAC | Phase 1 to Ground | 3G | 3.5G | 3G | 11GΩ | 550MΩ |
| | Amps 14.5 Amps | Phase 2 to Ground | 3G | 3.5G | 3G | 11GΩ | 550MΩ |
| | HP 15 kVA | Phase 3 to Ground | 3G | 3.5M | 3G | 11GΩ | 550MΩ |
| Cable Size 3C#12 | | | | | | | |
| Breaker # E2-1 | | | | | | | |
| | Secondary | Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Volts 440 VAC | Phase 1 to Ground | 2M | 3.5G | 3G | 59.6MΩ | 550MΩ |
| | HP 13.5 kVA | Phase 2 to Ground | 2M | 3.5G | 3G | 59.6MΩ | 550MΩ |
| | Cable Size 3C#8 | Phase 3 to Ground | 2M | 3.5G | 3G | 59.6MΩ | 550MΩ |
| Breaker # E2-1A | | | | | | | |

Whistle Compressor

| | | | | | | |
|------------------|--------------------|----------|------------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 7.4G | 5G | 5G | 5.3MΩ | 550MΩ |
| Amps 9 Amps | Phase 2 to Ground | 7.4G | 5G | 5G | 5.3MΩ | 550MΩ |
| HP 7.5 Hp | Phase 3 to Ground | 7.4 | 5G | 5G | 5.3MΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | 7.4G | 5G | 5G | 5.3MΩ | 550MΩ |
| Breaker # E2-2 | Phase 1 to Phase 3 | 7.4G | 5G | 5G | 5.3MΩ | 550MΩ |
| | Phase 2 to Phase 3 | 7.4G | 5G | 5G | 5.3MΩ | 550MΩ |

Emergency Generator Radiator Fan

| | | | | | | |
|------------------|-------------------|----------|------------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 2.7 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 2 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | | | | | | |
| Breaker # E2-3 | | | | | | |

Emergency Fire Pump

| | | | | | | |
|---------------|-------------------|----------|------------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 4.7G | 3.5G | 4G | 976MΩ | 550MΩ |

Amps 32 Amps
HP 30 Hp
Cable Size 3C#6
Breaker # E2-4

| | | | | | |
|-------------------|------|------|----|-------|-------|
| Phase 2 to Ground | 4.7G | 3.5G | 4G | 976MΩ | 550MΩ |
| Phase 3 to Ground | 4.7G | 3.5G | 4G | 976MΩ | 550MΩ |

Bilge Pump

Specs:
Volts 600 VAC
Amps 32 Amps
HP 30 Hp
Cable Size 3C#6
Breaker # E2-5

| | | | | | |
|--------------------|----------|------------|-----------|-----------|-----------|
| Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 1 to Phase 2 | | 11G | 11G | 11GΩ | 550MΩ |
| Phase 1 to Phase 3 | | 11G | 11G | 11GΩ | 550MΩ |
| Phase 2 to Phase 3 | | 11G | 11G | 11GΩ | 550MΩ |

Motor:

| | | | | | |
|-------------------|----------|------------|-----------|-----------|-----------|
| Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 6.6G | 6.5G | 6.5G | 8.1GΩ | 550MΩ |
| Phase 2 to Ground | 6.6G | 6.5G | 6.5G | 8.1GΩ | 550MΩ |
| Phase 3 to Ground | 6.6G | 6.5G | 6.5G | 8.1GΩ | 550MΩ |

Air Compressor #1 (Engine Starting)

Specs:
Volts 600 VAC
Amps 18 Amps
HP 16 Hp
Cable Size 3C#10
Breaker # E2-6

| | | | | | |
|--------------------|----------|------------|-----------|-----------|-----------|
| Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 1 to Phase 2 | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 1 to Phase 3 | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 2 to Phase 3 | 111G | 11G | 11G | 11GΩ | 550MΩ |

Motor:

| | | | | | |
|-------------------|----------|------------|-----------|-----------|-----------|
| Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 1.8G | 7G | 1.8G | 3.4GΩ | 550MΩ |
| Phase 2 to Ground | 1.8G | 7G | 1.8G | 3.4GΩ | 550MΩ |
| Phase 3 to Ground | 1.8G | 7G | 1.8G | 3.4GΩ | 550MΩ |

Searchlight #1

Specs:
Volts 600 VAC
Amps 1.7 Amps
HP 1 kW
Cable Size 3C#14
Breaker # E2-10

| | | | | | |
|--------------------|----------|------------|-----------|-----------|-----------|
| Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 4.6G | 5G | 5G | 11GΩ | 550MΩ |
| Phase 2 to Ground | 4.6G | 5G | 5G | 11GΩ | 550MΩ |
| Phase 3 to Ground | 4.6G | 5G | 5G | 11GΩ | 550MΩ |
| Phase 1 to Phase 2 | | 5G | 5G | 11GΩ | 550MΩ |
| Phase 1 to Phase 3 | | 5G | 5G | 11GΩ | 550MΩ |
| Phase 2 to Phase 3 | | 5G | 5G | 11GΩ | 550MΩ |

Emergency Fuel Oil Transfer Pump

Specs:
Volts 600 VAC
Amps 2.1 Amps
HP 1.5 Hp
Cable Size 3C#14
Breaker # E2-11

| | | | | | |
|--------------------|----------|------------|-----------|-----------|-----------|
| Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Phase 1 to Ground | 3.6G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 2 to Ground | 3.6G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 3 to Ground | 3.6G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|------|----------|------------|-----------|-----------|-----------|
| Motor: | Phase 1 to Ground | | 3.6G | 3.5G | 3.5G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | 3.6G | 3.5G | 3.5G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | | 3.6G | 3.5G | 3.5G | 11GΩ | 550MΩ |

Emergency Generator Compartment Supply Fan

| Specs: | | Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|----------|--------------------|----------|------------|-----------|-----------|-----------|
| Volts | 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 1.1 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | .75 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | E2-12 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | Date | 9/7/2011 | 30/08.2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|------|----------|------------|-----------|-----------|-----------|
| Motor: | Phase 1 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | | 11G | 11G | 11G | 11GΩ | 550MΩ |

Spare Breaker (For Future Expansion)

600 Volt Semi-Essential MCC #1

Dwg Ref: 161-603-5 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. .
DISCONNECT the load before continuing to crank the Megger or damage may result!

Main Engine Pre-Lube Oil Pump # Canadian Coast Guard

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-----------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts Parry Sound, OI | Phase 1 to Ground | 3G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 3.9 Amps | Phase 2 to Ground | 3G | 11G | 11G | 11GΩ | 550MΩ |
| HP 3 Hp | Phase 3 to Ground | 3G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M6-1 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | | | | | |
| Motor: | Phase 1 to Ground | 3G | 7.3G | 6G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 3G | 7.3G | 6G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 3G | 7.3G | 6G | 11GΩ | 550MΩ |

Air Conditioning Unit #1

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600VAC | Phase 1 to Ground | 6.6G | 5G | 6G | 11GΩ | 550MΩ |
| Amps 7.5 Amps | Phase 2 to Ground | 6.6G | 5G | 6G | 11GΩ | 550MΩ |
| HP 3 HP | Phase 3 to Ground | 6.6G | 5G | 6G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 5G | 6G | 11GΩ | 550MΩ |
| Breaker # M6-2 | Phase 1 to Phase 3 | N/A | 5G | 6G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 5G | 6G | 11GΩ | 550MΩ |

Air Conditioning Compressor Cooling Pump #1

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 11 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 7.5 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M6-3 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | | | | | |
| Motor: | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |

Reverse Osmosis Water Maker (Single Phase Load)

| Specs: | Date | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|-----------|-----------|------------|------------|
| Volts 600 VAC | Phase 1 to Ground | SPARE | | LOCKED OUT | LOCKED OUT |
| Amps 14 Amps | Phase 2 to Ground | SPARE | | LOCKED OUT | LOCKED OUT |
| HP 8 Hp | Phase 3 to Ground | SPARE | | LOCKED OUT | LOCKED OUT |
| Cable Size 3C#12 | Phase 1 to Phase 2 | SPARE | | LOCKED OUT | LOCKED OUT |
| Breaker # M6-4 | Phase 1 to Phase 3 | SPARE | | LOCKED OUT | LOCKED OUT |
| | Phase 2 to Phase 3 | SPARE | | LOCKED OUT | LOCKED OUT |

Accommodation Supply Fan #2 (2-speed)

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 2.7 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 2 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 2x3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M6-5 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|-------------------|-------------------|------|------|----|-------|-------|
| Slow Speed | Phase 1 to Ground | 2.2G | 3G | 3G | 2.6GΩ | 550MΩ |
| | Phase 2 to Ground | 2.2G | 3.2G | 3G | 2.6GΩ | 550MΩ |
| | Phase 3 to Ground | 2.2G | 3.2G | 3G | 2.6GΩ | 550MΩ |
| High Speed | Phase 1 to Ground | 2.2G | 3.9G | 4G | 2.6GΩ | 550MΩ |
| | Phase 2 to Ground | 2.2G | 3.9G | 4G | 2.6GΩ | 550MΩ |
| | Phase 3 to Ground | 2.2G | 3.9G | 4G | 2.6GΩ | 550MΩ |

Accommodation Supply Fan #3 (2-speed)

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 3G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 2.7 Amps | Phase 2 to Ground | 3G | 11G | 11G | 11GΩ | 550MΩ |
| HP 2 Hp | Phase 3 to Ground | 3G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 2x3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M6-6 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|-------------------|-------------------|----|------|----|-------|-------|
| Slow Speed | Phase 1 to Ground | 3G | 3.9G | 4G | 2.6GΩ | 550MΩ |
| | Phase 2 to Ground | 3G | 3.9G | 4G | 2.6GΩ | 550MΩ |
| | Phase 3 to Ground | 3G | 3.9G | 4G | 2.6GΩ | 550MΩ |
| High Speed | Phase 1 to Ground | 3G | 3.8G | 4G | 2.6GΩ | 550MΩ |
| | Phase 2 to Ground | 3G | 3.8G | 4G | 2.6GΩ | 550MΩ |
| | Phase 3 to Ground | 3G | 3.8G | 4G | 2.6GΩ | 550MΩ |

Domestic Fresh Water Pressure Pump #2

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 1.8 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 11.2 kW | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M6-7 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|-------------------|----------|-----------|-----------|-----------|-----------|
| Motor: | Phase 1 to Ground | 10G | 9G | 9G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 10G | 9G | 9G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 10G | 9G | 9G | 11GΩ | 550MΩ |

Controllable Pitch Propeller Hydraulic Pump #3

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|---------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps | 48 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | 50 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | 3C#4 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # | M6-8 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| Motor: | | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|--------------------|----------|-----------|-----------|-----------|-----------|
| | Phase 1 to Ground | | | | | |
| | Phase 2 to Ground | 2.3G | 2.5G | 2.5G | 2.3GΩ | 550MΩ |
| | Phase 3 to Ground | 2.3G | 2.5G | 2.5G | 2.3GΩ | 550MΩ |
| | Phase 1 to Phase 2 | 2.3G | 2.5G | 2.5G | 2.3GΩ | 550MΩ |

Spare Breaker (For Future Expansion)

Searchlight #2

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------|----------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts | 600 VAC | Phase 1 to Ground | 2.5G | 9G | 7G | 6.8GΩ | 550MΩ |
| Amps | 1.7 Amps | Phase 2 to Ground | 2.5G | 9G | 7G | 6.8GΩ | 550MΩ |
| HP | 1 kW | Phase 3 to Ground | 2.5G | 9G | 7G | 6.8GΩ | 550MΩ |
| Cable Size | 3C#14 | Phase 1 to Phase 2 | 2.5G | 9G | 7G | 6.8GΩ | 550MΩ |
| Breaker # | M6-10 | Phase 1 to Phase 3 | 2.5G | 9G | 7G | 6.8GΩ | 550MΩ |
| | | Phase 2 to Phase 3 | 2.5G | 9G | 7G | 6.8GΩ | 550MΩ |

600 Volt Semi-Essential MCC #2

Dwg Ref: 161-603-5 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. DISCONNECT the load before continuing to crank the Megger or damage may result!

Main Engine Pre-Lube Oil Pump #1 Canadian Coast Guard

| Specs: | Date | 07/09/201 | 1/3/2013 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-----------------------|--------------------|-----------|----------|-----------|-----------|-----------|
| Volts Parry Sound, OI | Phase 1 to Ground | 11G | 4G | 4G | 11GΩ | 550MΩ |
| Amps 3.9 Amps | Phase 2 to Ground | 11G | 4G | 4G | 11GΩ | 550MΩ |
| HP 3 Hp | Phase 3 to Ground | 11G | 4G | 4G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | N/A | | 11GΩ | 550MΩ |
| Breaker # M3-1 | Phase 1 to Phase 3 | N/A | N/A | | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | N/A | | 11GΩ | 550MΩ |
| Motor: | | | | | | |
| | Phase 1 to Ground | 2G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 2G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 2G | 4G | 4G | 11GΩ | 550MΩ |

Galley Exhaust Fan (M3-2)

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 5.2 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 4 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M3-2 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Motor: | | | | | | |
| | Phase 1 to Ground | 2.5G | 4.3G | 4.3G | 7.1GΩ | 550MΩ |
| | Phase 2 to Ground | 2.5G | 4.3G | 4.3G | 7.1GΩ | 550MΩ |
| | Phase 3 to Ground | 2.5G | 4.3G | 4.3G | 7.1GΩ | 550MΩ |

Air Conditioning Unit #2 (M3-3)

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC | Phase 1 to Ground | 4G | 11G | 11G | 168MΩ | 550MΩ |
| Amps 12.4 Amps | Phase 2 to Ground | 4G | 11G | 11G | 168MΩ | 550MΩ |
| HP 7.5 Hp | Phase 3 to Ground | 4G | 11G | 11G | 340MΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 268MΩ | 550MΩ |
| Breaker # M3-3 | Phase 1 to Phase 3 | N/A | 11G | 11G | 268MΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 268MΩ | 550MΩ |

Air Conditioning Compressor Cooling Pump #2 (M3-4)

| | | | | | | |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 11Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 7.5 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M3-4 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|----|------|----|------|-------|
| Motor: | Phase 1 to Ground | 3G | 3.9G | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 3G | 3.9G | 4G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 3G | 3.9G | 4G | 11GΩ | 550MΩ |

Accommodation Supply Fan #1 (2-speed) (M3-5)

| | | | | | | |
|--------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 2.7 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 2 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 2x3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M3-5 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|-------------------|-------------------|------|------|------|-------|-------|
| Slow Speed | Phase 1 to Ground | 2.5G | 2.3 | 2.5G | 1.1GΩ | 550MΩ |
| | Phase 2 to Ground | 2.5G | 2.3G | 2.5G | 1.1GΩ | 550MΩ |
| | Phase 3 to Ground | 2.5G | 2.3G | 2.5G | 1.1GΩ | 550MΩ |
| High Speed | Phase 1 to Ground | 2.5G | 2.5G | 2.5G | 2.1GΩ | 550MΩ |
| | Phase 2 to Ground | 2.5G | 2.5G | 2.5G | 2.1GΩ | 550MΩ |
| | Phase 3 to Ground | 2.5G | 2.5G | 2.5G | 2.1GΩ | 550MΩ |

Controllable Pitch Propeller Hydraulic Pump #4 (M3-6)

| | | | | | | |
|-----------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 11G | 2.5G | 11G | 11GΩ | 550MΩ |
| Amps 49 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 47 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#4 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M3-6 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|------|------|------|-------|-------|
| Motor: | Phase 1 to Ground | 2.4G | 5.3G | 2.8G | 3.1GΩ | 550MΩ |
| | Phase 2 to Ground | 2.4G | 5.3G | 2.8G | 3.1GΩ | 550MΩ |
| | Phase 3 to Ground | 2.4G | 5.3G | 2.8G | 3.1GΩ | 550MΩ |

Toilet Exhaust Fan (M3-7)

| | | | | | | |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 3.9 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 3 Hp | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M3-7 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|---------------|-------------------|------|----|----|-------|-------|
| Motor: | Phase 1 to Ground | 2.5G | 4G | 3G | 7.1GΩ | 550MΩ |
| | Phase 2 to Ground | 2.5G | 4G | 3G | 7.1GΩ | 550MΩ |
| | Phase 3 to Ground | 2.5G | 4G | 3G | 7.1GΩ | 550MΩ |

Domestic Fresh Water Pressure Pump #1 (M3-8)

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps 1.4 Amps HP 1.12 Hp Cable Size 3C#14 Breaker # M3-8 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 1.1G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 1.1G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 1.1G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | | | | | |

| | | | | | | |
|---------------|-------------------|------|-----|-----|-------|-------|
| Motor: | Phase 1 to Ground | 1.3G | 11G | 11G | 8.1GΩ | 550MΩ |
| | Phase 2 to Ground | 1.3G | 11G | 11G | 8.1GΩ | 550MΩ |
| | Phase 3 to Ground | 1.3G | 11G | 11G | 8.1GΩ | 550MΩ |

Rescue Boat Miranda Davit Motor #2

| | | | | | | |
|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps HP Cable Size Breaker # M3-9 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 3.5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 2 to Ground | 11G | 3.5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 3 to Ground | 11G | 3.5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 2 | N/A | 3.5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 1 to Phase 3 | N/A | 3.5G | 5G | 11GΩ | 2.2GΩ |
| | Phase 2 to Phase 3 | N/A | 3.5G | 5G | 11GΩ | 2.2GΩ |
| | Motor 1 - Ground | N/A | 300M | 300M | 268MΩ | 550MΩ |
| | Motor 2 - Ground | N/A | 300M | 300M | 268MΩ | 550MΩ |
| | Motor 3 - Ground | N/A | 300M | 300M | 268MΩ | 550MΩ |
| | | | | | | |
| | | | | | | |

Spare Breaker (For Future Expansion)

Cathodic Protection (M3-11) SPARE

| | | | | | | |
|---|--------------------|--|-----------|-----------|-----------|-----------|
| Specs: Volts 600 VAC Amps HP Cable Size Breaker # M3-11 | Date | | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | | 11G | 11G | SPARE | SPARE |
| | Phase 2 to Ground | | 11G | 11G | SPARE | SPARE |
| | Phase 3 to Ground | | 11G | 11G | SPARE | SPARE |
| | Phase 1 to Phase 2 | | 11G | 11G | SPARE | SPARE |
| | Phase 1 to Phase 3 | | 11G | 11G | SPARE | SPARE |
| | Phase 2 to Phase 3 | | 11G | 11G | SPARE | SPARE |

600 Volt Non-Essential MCC #1

Dwg Ref: 161-603-6 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. DISCONNECT the load before continuing to crank the Megger or damage may result!

Waste Oil Discharge (M2-1) Canadian Coast Guard

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|----------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts Parry Sound, O | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 2.5 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 2 HP | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M2-1 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | | | | | |
| Motor | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |

Oily Water Separator

Main Engine Pre-Heat Circulator Pump #1 (M2-3)

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 0.34 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 1.5 HP | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M2-3 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | | | | | |
| Motor | Phase 1 to Ground | 3.6G | 3.5G | 3.6G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 3.6G | 3.5G | 3.6G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 3.6G | 3.5G | 3.6G | 11GΩ | 550MΩ |

Main Engine Pre-Heat Circulator Pump #2 (M2-4)

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 0.34Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 1.5 HP | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|----------------|--------------------|-------|-----|-----|------|-------|
| Breaker # M2-4 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Motor | Phase 1 to Ground | 1250M | 1G | 1G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 1250M | 1G | 1G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 1250M | 1G | 1G | 11GΩ | 550MΩ |

Main Engine Pre-Heater #1 (M2-5)

| | | | | | | |
|----------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 1430M | 3.8G | 3.5G | 11GΩ | 550MΩ |
| Amps 16.1 Amps | Phase 2 to Ground | 1430M | 3.8G | 3.5G | 11GΩ | 550MΩ |
| HP 15 KW | Phase 3 to Ground | 1430M | 3.8G | 3.5G | 11GΩ | 550MΩ |

Main Engine Pre-Heater #2 (M2-6)

| | | | | | | |
|----------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 4.8M | 3.8G | 3.5G | 11GΩ | 550MΩ |
| Amps 16.1 Amps | Phase 2 to Ground | 4.8M | 3.8G | 3.5G | 11GΩ | 550MΩ |
| HP 15 KW | Phase 3 to Ground | 4.8M | 3.8G | 3.5G | 11GΩ | 550MΩ |

Domestic Hot Water Calorifier #1 (M2-7)

| | | | | | | |
|----------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 13.6 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |

Main Engine Turning Gear #1 (M2-8)

| | | | | | | |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 5.2 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 3.45KW | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Motor | Phase 1 to Ground | 9G | 3.5G | 3G | 4.9GΩ | 550MΩ |
| | Phase 2 to Ground | 9G | 3.5G | 3G | 4.9GΩ | 550MΩ |
| | Phase 3 to Ground | 9G | 3.5G | 3G | 4.9GΩ | 550MΩ |

Domestic Fresh Water Transfer Pump (M2-9)

| | | | | | | |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 11 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 5.6 KW | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M2-9 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Motor | Phase 1 to Ground | 3G | 3.8G | 3G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 3G | 3.8G | 3G | 11GΩ | 550MΩ |

| | | | | | |
|-------------------|----|------|----|------|-------|
| Phase 3 to Ground | 3G | 3.8G | 3G | 11GΩ | 550MΩ |
|-------------------|----|------|----|------|-------|

Spare Breaker (For Future Expansion)

Humidifier #1 (M2-11)

| | | | | | | |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 10G | 3.5G | 3.5G | 5.3GΩ | 550MΩ |
| Amps 10 Amps | Phase 2 to Ground | 10G | 4G | 3.5G | 5.3GΩ | 550MΩ |
| HP | Phase 3 to Ground | 10G | 4G | 3.5G | 5.3GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 4G | 3.5G | 5.3GΩ | 550MΩ |
| Breaker # M2-11 | Phase 1 to Phase 3 | N/A | 4G | 3.5G | 5.3GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 4G | 3.5G | 5.3GΩ | 550MΩ |

Freezer Refrigeration Compressors (M2-12)

| | | | | | | |
|------------------|--------------------|-----|-----------|-----------|-----------|-----------|
| Specs: | Date | 11G | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 4.2 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 1.5 HP | Phase 3 to Ground | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M2-12 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Motor 1: | Phase 1 to Ground | 11G | 5G | 5G | 5.3GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 5G | 5G | 5.3GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 5G | 5G | 5.3GΩ | 550MΩ |
| Motor 2: | Phase 1 to Ground | 11G | 5G | 5G | 5.6GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 5G | 5G | 5.6GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 5G | 5G | 5.6GΩ | 550MΩ |

Spare Breaker (For Future Expansion)

Standby Main Engine Raw Water Pump (M2-14)

| | | | | | | |
|-----------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 32 Amp | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 30 HP | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#6 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M2-14 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Motor | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |

600 Volt Non-Essential MCC #2

Dwg Ref: 161-603-6 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. DISCONNECT the load before continuing to crank the Megger or damage may result!

M.E Preheat Circ Pump#3 Canadian Coast Guard

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|-----------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts Parry Sound, ON | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 0.34 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 1.5 HP | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M12-1 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | | | | | | |
| Motor | Phase 1 to Ground | 3.4G | 2.6G | 2.5G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 3.4G | 2.6G | 2.5G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 3.4G | 2.6G | 2.5G | 11GΩ | 550MΩ |

M.E Preheater #3 M12-2

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600VAC | Phase 1 to Ground | 11G | 7G | 7G | 6.8GΩ | 550MΩ |
| Amps 16.1 Amps | Phase 2 to Ground | 11G | 7G | 7G | 6.8GΩ | 550MΩ |
| HP 15 KW | Phase 3 to Ground | 11G | 7G | 7G | 6.8GΩ | 550MΩ |
| Cable Size 3C#12 | Phase 1 to Phase 2 | N/A | 7G | 7G | 6.8GΩ | 550MΩ |
| Breaker # M12-2 | Phase 1 to Phase 3 | N/A | 7G | 7G | 6.8GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 7G | 7G | 6.8GΩ | 550MΩ |
| | | | | | | |
| Heater | Phase 1 to Ground | 0 | 1G | 1G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 0 | 1G | 1G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 0 | 1G | 1G | 11GΩ | 550MΩ |

M.E Turning Gear #2 M12-3

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Volts 600VAC | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 5.2 Amps | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| HP 3.45 KW | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M12-3 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|-------|-------------------|------|------|----|------|-------|
| Motor | Phase 1 to Ground | 3.5G | 4.3G | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 3.5G | 4.3G | 4G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 3.5G | 4.3G | 4G | 11GΩ | 550MΩ |

Sewage Treatment Plant M12-4

| | | | | | | |
|---|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600VAC Amps 5.2 Amps HP Cable Size 3C#14 Breaker # M12-4 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 2.6GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 2.6GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 2.6GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

Heater Circ Pump #1 M12-5 (Boiler)

| | | | | | | |
|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600VAC Amps 1.9 Amps HP 1.5 HP Cable Size 3C#14 Breaker # M12-5 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | 11G | 11G | 8GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 8GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 8GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|-------|-------------------|----|-----|-----|------|-------|
| Motor | Phase 1 to Ground | 5G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 5G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 5G | 11G | 11G | 11GΩ | 550MΩ |

Spare Breaker # M12-6

Domestic H.W. Calorifier#2 M12-7

| | | | | | | |
|--|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600VAC Amps 13.6 Amps HP 13.5 KW Cable Size 3C#14 Breaker # M12-7 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 7.5G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 7.5G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 7.5G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

F.W. Generator M12-8

| | | | | | | |
|---|--------------------|----------|-----------|-----------|------------|------------|
| Specs: Volts 600VAC Amps 11 Amps HP 8.5 KW Cable Size 3C#14 Breaker # M12-8 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 11G | EQUIP | | LOCKED OUT | LOCKED OUT |
| | Phase 2 to Ground | 11G | Removed | | LOCKED OUT | LOCKED OUT |
| | Phase 3 to Ground | 11G | | | LOCKED OUT | LOCKED OUT |
| | Phase 1 to Phase 2 | N/A | | | LOCKED OUT | LOCKED OUT |
| | Phase 1 to Phase 3 | N/A | | | LOCKED OUT | LOCKED OUT |
| | Phase 2 to Phase 3 | N/A | | | LOCKED OUT | LOCKED OUT |

Engine Room Welder (Single Phase) M12-9

| | | | | | | |
|-------------------------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Specs: Volts 600VAC | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| | Phase 1 to Ground | 1250M | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|-----------------|--------------------|-------|-----|-----|------|-------|
| Amps | Phase 2 to Ground | 1250M | 11G | 11G | 11GΩ | 550MΩ |
| HP | Phase 3 to Ground | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M12-9 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

Humidifier #2 M12-10

| | | | | | | |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 3.6G | 4.3G | 4G | 11GΩ | 550MΩ |
| Amps 5.8 Amps | Phase 2 to Ground | 3.6G | 4.3G | 4G | 11GΩ | 550MΩ |
| HP | Phase 3 to Ground | 3.6G | 4.3G | 4G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 4.3G | 4G | 11GΩ | 550MΩ |
| Breaker # M12-10 | Phase 1 to Phase 3 | N/A | 4.3G | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 4.3G | 4G | 11GΩ | 550MΩ |

Sanitary F/W Pressure Pump #1 M12-11

| | | | | | | |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600VAC | Phase 1 to Ground | 1.5G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 1.8 Amps | Phase 2 to Ground | 1.5G | 11G | 11G | 11GΩ | 550MΩ |
| HP 1.12 KW | Phase 3 to Ground | 1.5G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Breaker # M12-11 | Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

| | | | | | | |
|-------|-------------------|-----|-----|-----|-------|-------|
| Motor | Phase 1 to Ground | 11G | 11G | 11G | 6.4GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 6.4GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 6.4GΩ | 550MΩ |
| | | | | | | |

Spare Breaker # M12-12

600 Volt NoN-Essential MCC #3

Dwg Ref: 161-603-6 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. DISCONNECT the load before continuing to crank the Megger or damage may result!

Potable Water Chlorination

| Specs: | | Date | 9/7/2011 | 1/3/2013 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--|--------------------|------|----------|----------|-----------|-----------|-----------|
| Volts Parry Sound, ON Amps 0.34 Amps HP 1.5 Hp Cable Size 3C#14 Breaker # M8-1 | Phase 1 to Ground | | 11G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | 11G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | | 11G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | | N/A | N/A | | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | | N/A | N/A | | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | N/A | | 11GΩ | 550MΩ |
| Motor | Phase 1 to Ground | | 3G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | 3G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | | 3G | 4G | 4G | 11GΩ | 550MΩ |

M.E. Preheater #4 (M8-2)

| Specs: | | Date | 9/7/2011 | 1/3/2013 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|---|--------------------|------|----------|----------|-----------|-----------|-----------|
| Volts 600 VAC Amps 16.1 Amps HP 15 KW Cable Size 3C#12 Breaker # M8-2 | Phase 1 to Ground | | 2.3G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | 2.3G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | | 2.3G | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 2 | | N/A | N/A | | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | | N/A | N/A | | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | N/A | | 11GΩ | 550MΩ |

Chain Locker Bilge Pump (M8-3)

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|---|--------------------|------|----------|-----------|-----------|-----------|-----------|
| Volts 600 VAC Amps 3.9 Amps HP 3 Hp Cable Size 3C#14 Breaker # M8-3 | Phase 1 to Ground | | .1M | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | .1M | 11G | 11G | 11GΩ | 475MΩ |
| | Phase 3 to Ground | | .1M | 11G | 11G | 11GΩ | 475MΩ |
| | Phase 1 to Phase 2 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 1 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Motor | Phase 1 to Ground | | 6.3M | 500M | 500M | 11GΩ | 550MΩ |
| | Phase 2 to Ground | | 6.3M | 500M | 500M | 11GΩ | 550MΩ |
| | Phase 3 to Ground | | 6.3M | 500M | 500M | 11GΩ | 550MΩ |

Lathe

| Specs: | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|--------|--|------|----------|-----------|-----------|-----------|-----------|
|--------|--|------|----------|-----------|-----------|-----------|-----------|

| | | | | | | |
|------------------|--------------------|------|----|----|------|-------|
| Volts 600 VAC | Phase 1 to Ground | 1.5G | 7G | 7G | 11GΩ | 550MΩ |
| Amps 9 Amps | Phase 2 to Ground | 1.5G | 7G | 7G | 11GΩ | 550MΩ |
| HP 7.5 Hp | Phase 3 to Ground | 1.5G | 7G | 7G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 7G | 7G | 11GΩ | 550MΩ |
| Breaker # M8-4 | Phase 1 to Phase 3 | N/A | 7G | 7G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | 7G | 7G | 11GΩ | 550MΩ |

Electric Welder

| | | | | | | |
|-----------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 5.5G | 11G | 11G | 11GΩ | 550MΩ |
| Amps 36.8 Amps | Phase 2 to Ground | 5.5G | 11G | 11G | 11GΩ | 550MΩ |
| Cable Size 3C#8 | | | | | | |
| Breaker # M8-5 | | | | | | |

Spare Breaker # M8-6

Spare Breaker # M8-7

Washer / Dryer Transformer - Single Phase

| | | | | | | |
|----------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 8/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 2.4G | 2.5G | 2.4G | 11GΩ | 550MΩ |
| Breaker # M8-8 | Phase 2 to Ground | 2.4G | 2.5G | 2.4G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | N/A | 2.5G | 2.4G | 11GΩ | 550MΩ |

Humidifier #3

| | | | | | | |
|------------------|-------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 3.5G | 3.5G | 3.5G | 11GΩ | 550MΩ |
| Amps 5.8 Amps | Phase 2 to Ground | 3.5G | 3.5G | 3.5G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 3 to Ground | 3.5G | 3.5G | 3.5G | 11GΩ | 550MΩ |
| Breaker # M8-9 | | | | | | |

Sanitary F/W Pressure Pump #2

| | | | | | | |
|------------------|--------------------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
| Volts 600 VAC | Phase 1 to Ground | 4.8G | 4G | 4G | 11GΩ | 550MΩ |
| Amps 1.8 Amps | Phase 2 to Ground | 4.8G | 4G | 4G | 11GΩ | 550MΩ |
| HP 1.12 KW | Phase 3 to Ground | 4.8G | 4G | 4G | 11GΩ | 550MΩ |
| Cable Size 3C#14 | Phase 1 to Phase 2 | N/A | 4G | 4G | 11GΩ | 550MΩ |
| Breaker # M8-10 | Phase 1 to Phase 3 | N/A | 4G | 4G | 11GΩ | 550MΩ |
| | Phase 2 to Phase 3 | N/A | G4 | 4G | 11GΩ | 550MΩ |
| | | | | | | |
| Motor | Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| | | | | | | |

Walk-In Cooler SPARE

Heater Circ Pump #2

| | | | | | | |
|---------------|------|----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 9/21/2017 | 11/1/2018 |
|---------------|------|----------|-----------|-----------|-----------|-----------|

Volts 600 VAC
Amps 1.9 Amps
HP 1.5 HP
Cable Size 3C#14
Breaker # M8-12
Test Results

| | | | | | |
|--------------------|-----|-----|-----|------|-------|
| Phase 1 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 2 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 3 to Ground | 11G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 1 to Phase 2 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Phase 1 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |
| Phase 2 to Phase 3 | N/A | 11G | 11G | 11GΩ | 550MΩ |

Motor

| | | | | | |
|-------------------|------|-----|-----|------|-------|
| Phase 1 to Ground | 8.2G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 2 to Ground | 8.2G | 11G | 11G | 11GΩ | 550MΩ |
| Phase 3 to Ground | 8.2G | 11G | 11G | 11GΩ | 550MΩ |

240 Volt NoN-Essential MCC #1

Dwg Ref: 161-603-7 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. DISCONNECT the load before continuing to crank the Megger or damage may result!

Reheat Panel M5-1 Bridge Canadian Coast Guard

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
|--------------------------------------|--------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Volts Parry Sound, Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Amps 126 AT Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| HP 30 KW Phase 3 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Cable Size 3C#1/0 Phase 1 to Phase 2 | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Breaker # M5-1 Phase 1 to Phase 3 | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| | Phase 2 to Phase 3 | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

Reheat Panel M5-2 Boat Deck

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
|------------------------------------|--------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Volts 240VAC Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Amps 116 AT Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| HP 26.5 KW Phase 3 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Cable Size 3C#1 Phase 1 to Phase 2 | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Breaker # M5-2 Phase 1 to Phase 3 | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| | Phase 2 to Phase 3 | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

Reheat Panel M5-3 Main Deck

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
|------------------------------------|--------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Volts 240VAC Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Amps 106 AT Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| HP 23.5 KW Phase 3 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Cable Size 3C#1 Phase 1 to Phase 2 | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Breaker # M5-3 Phase 1 to Phase 3 | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| | Phase 2 to Phase 3 | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

Reheat Panel M5-4 E/R level

| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
|------------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Volts 240VAC Phase 1 to Ground | | 200M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Amps 42 AT Phase 2 to Ground | | 200M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| HP 9.75 KW Phase 3 to Ground | | 200M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Cable Size 3C#8 Phase 1 to Phase 2 | | 200M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|----------------|--------------------|------|------|------|-----|-----|-------|-------|
| Breaker # M5-4 | Phase 1 to Phase 3 | 200M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| | Phase 2 to Phase 3 | 200M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

Wartsilla alarm system 220 volt supply M5-5

| | | | | | | | | |
|----------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | Phase 1 to Ground | 550M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Cable Size | | | | | | 220 | | |
| Breaker # M5-5 | | | | | | 220 | 550MΩ | 550MΩ |

Buoy Crane Auxillary Circuits

| | | | | | | | | |
|-----------------|--------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | Phase 1 to Ground | 20M | 25M | 20M | 15 | 15 | 16.7MΩ | 18MΩ |
| Amps 101 AT | Phase 2 to Ground | 20M | 25M | 20M | 15 | NA | 16.7MΩ | 18MΩ |
| HP 20 KW | Phase 3 to Ground | 20M | 25M | 20M | 15 | 15 | 16.7MΩ | 18MΩ |
| Cable Size 3C#2 | Phase 1 to Phase 2 | | 25M | 20M | NA | NA | NA | NA |
| Breaker # M5-6 | Phase 1 to Phase 3 | | 25M | 20M | NA | NA | NA | NA |
| | Phase 2 to Phase 3 | | 25M | 20M | NA | | NA | NA |

Dryer #1

| | | | | | | | | |
|-----------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | Phase 1 to Ground | 2.3G | 2.5G | 2.5G | 3 | 3 | 550MΩ | 550MΩ |
| Amps 65 AT | Phase 2 to Ground | 2.3G | 2.5G | 2.5G | 3 | 3 | 550MΩ | 550MΩ |
| Cable Size 3C#6 | Phase 3 to Ground | 2.3G | 2.5G | 2.5G | 3 | 3 | 550MΩ | 550MΩ |
| Breaker # M5-7 | | | | | | | | |

Dryer #2

| | | | | | | | | |
|-----------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | Phase 1 to Ground | 3.7G | 4G | 4G | 3 | 3 | 550MΩ | 550MΩ |
| Amps 65 AT | Phase 2 to Ground | 3.7G | 4G | 4G | 3 | 3 | 550MΩ | 550MΩ |
| Cable Size 3C#6 | Phase 3 to Ground | 3.7G | 4G | 4G | 3 | 3 | 550MΩ | 550MΩ |
| Breaker # M5-8 | | | | | | | | |

Washer #1

| | | | | | | | | |
|------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | Phase 1 to Ground | 2.6G | 3.8G | 3.5G | 3 | 3 | 550MΩ | 550MΩ |
| Amps 15 AT | Phase 2 to Ground | 2.6G | 3.8G | 3.5G | 3 | 3 | 550MΩ | 550MΩ |
| Cable Size 3C#14 | Phase 3 to Ground | 2.6G | 3.8G | 3.5G | 3 | 3 | 550MΩ | 550MΩ |
| Breaker # M5-9 | | | | | | | | |

Washer #2

| | | | | | | | | |
|------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | Phase 1 to Ground | 2.6G | 2.8G | 2.5G | 2.5 | 2.5 | 19MΩ | 19MΩ |
| Amps 15 AT | Phase 2 to Ground | 2.6G | 2.8G | 2.5G | 2.5 | 2.5 | 19MΩ | 19MΩ |
| Cable Size 3C#14 | Phase 3 to Ground | 2.6G | 2.8G | 2.5G | 2.5 | 2.5 | 550MΩ | 550MΩ |

Plasma Cutter (Workshop Plug)

| | | | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | Phase 1 to Ground | .03M | 0.3M | 0.3M | 500 | 500 | 550MΩ | 275MΩ |

| | | | | | | | | |
|------------------|-------------------|------|------|------|-----|-----|-------|-------|
| Amps 15 AT | Phase 2 to Ground | .03M | 0.3M | 0.3M | 500 | 500 | 550MΩ | 275MΩ |
| Cable Size 3C#14 | Phase 3 to Ground | N/A | N/A | | 500 | 500 | 550MΩ | 275MΩ |
| Breaker # M5-11 | | | | | | | | |

Panel M5-1

Bridge and focsle deck heating panel

| | | | | | | | | |
|--------------------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1. Fwd w/h heaters&htr control | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|--------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2. Fwd w/h heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|--------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 3. Fwd w/h heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|--------------------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 4.Aft w/h heaters& htr control | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|--------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 5. Aft w/h heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|--------------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 6.Captains cabin heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|---------------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 7.Chief Eng cabin heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|---------------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 8.Senior eng cabin heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|---------------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 9. Log. Off. cabin heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|-----------------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 10. Chief Off. cabin heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|-------------------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 11.Wash rm,elect rm, stairway | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 11MΩ |

| | | | | | | | | |
|----------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 12. W/H air conditioner #1 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
|----------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|

| | | | | | | | | |
|---------------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 13. W/H air conditioner #2 | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 14. Elec. Room A/C | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 57 | 57 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 57 | 57 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 15. Stbd Searchlight Power Su | Date | | | | | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | | | | | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | | | | | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 16. Port Searchlight Power sup | Date | | | | | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | | | | | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | | | | | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 17. Stbd Searchlight PLC supp | Date | | | | | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | | | | | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | | | | | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 18. Port Searchlight PLC suppl | Date | | | | | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | | | | | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | | | | | 220 | 550MΩ | 275MΩ |

Panel M5-2 Boat deck heating panel

| | | | | | | | | |
|---|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1. Bosuns stores heater Port | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 139MΩ | 275MΩ |
| | | | | | | | | |
| 2. Bosun Stores heater Stbd and lights | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 140M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 140M | 220M | 220M | 220 | 220 | 280MΩ | 275MΩ |
| | | | | | | | | |
| 3.B deck wash, cadets heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 126MΩ | 275MΩ |
| | | | | | | | | |
| 4.Winchman & Oilers heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 5.Q.M., Supernum. heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 6.2nd & 3rd Eng. cabins heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 24M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|--|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Phase 2 to Ground | 24M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ | |
| | | | | | | | | |
| 7. Ships and eng office heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 8. Stairwell heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 9. Bosun & cooks heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| | | | | | | | | |
| 10. 2nd&3rd Off.cabin heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

11. Spare

Panel M5-3 Main deck heating panel

| | | | | | | | | |
|---|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1. Fwd&midship wash heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| 2. Clerk, seaman port heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| 3. Off. mess&stewd. heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| 4. Off lounge heaters | Date | 8/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| 5. Stairwell | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| 6. Laundry&deck locker heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| 7. Tech&seaman stbd heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 50M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 50M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| 8. Crews mess heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|---|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 9.Canteen&crew lounge heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|-------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 10.Em gen compt heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 12M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 12M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

| | | | | | | | | |
|--------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 11.Deck workshop heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 275MΩ |

Panel M5-4 Engine room heating panel

| | | | | | | | | |
|-------------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1. Bow Thruster Servo Heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|-------------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2. Bow Thruster Motor Heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|------------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 3.E.R workshop/ Sewage comp | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|---------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 4. Power packs W/T doors | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 2M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Phase 2 to Ground | | 220M | 2M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|--------------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 5. Stbd Steering flat heaters | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 206MΩ | 206MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|----------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 6.#1 (port) SSG JW heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|----------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 7.#2 (stbd) SSG JW heater | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|---------------------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 8.M.C.R. Air conditioner | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 150M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Phase 2 to Ground | | 220M | 150M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|---|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 9. Boiler (Thermal fluid heater) | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|---|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 10. Port Steering Flat Heater Outlet | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | | 220M | 220M | 220M | 220 | 220 | 153MΩ | 153MΩ |
| Phase 2 to Ground | | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

| | | | | | | | | |
|--------------------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 11. FWD Stores heater 2 (stbd) | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 0 | 550MΩ | 550MΩ |
| 12. Local Outlet 240 VAC | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| 14. Fwd Stores Heater 1 (port) | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220 | 220 | 550MΩ | 550MΩ |

240 Volt Non-Essential MCC #2

Dwg Ref: 161-603-7 of 8

WARNING: Extreme caution
should be used when Megger
Testing circuits that may support
sensitive electronic equipment.
DISCONNECT the load before
continuing to crank the Megger
or damage may result!

| | | | | | | | | |
|----------------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Canadian Coast Guard | | | | | | | | |
| Ranges and Oven | | | | | | | | |
| Amps 11.5 Amps | Date | 9/7/2011 | 8/30/2102 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| HP Parry Sound, ON | Phase 1 to Ground | 550M | 1.5G | 1.5G | 1 | 4000+ | 550MΩ | 275MΩ |
| Cable Size | Phase 2 to Ground | 550M | 1.5G | 1.5G | 1 | 4000+ | 550MΩ | 275MΩ |
| Breaker # M11-1 | Phase 3 to Ground | 550M | 1.5G | 1.5G | 1 | 4000+ | 550MΩ | 275MΩ |

| | | | | | | | | | | |
|-----------------|--|-------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Broiler | | | | | | | | | | |
| Specs: | | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | | Phase 1 to Ground | | 11G | 11G | 11G | 5 | 4000+ | 3.2MΩ | 275MΩ |
| Amps 40 AT | | Phase 2 to Ground | | 11G | 11G | 11G | 5 | 4000+ | 3.2MΩ | 275MΩ |
| HP 5.4 KW | | Phase 3 to Ground | | 11G | 11G | 11G | 5 | 4000+ | 3.2MΩ | 275MΩ |
| Breaker # M11-2 | | | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--|-------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Dishwasher booster heater | | | | | | | | | | |
| Specs: | | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | | Phase 1 to Ground | | 220M | 11G | 11G | 5 | 4000+ | 550MΩ | 275MΩ |
| Amps 79.1 Amps | | Phase 2 to Ground | | 220M | 11G | 11G | 5 | 4000+ | 550MΩ | 275MΩ |
| HP 5.7 KW | | | | | | | | 4000+ | 550MΩ | 275MΩ |
| Breaker # M11-3 | | | | | | | | | | |

| | | | | | | | | | | |
|-----------------|--|-------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Deep Fryer | | | | | | | | | | |
| Specs: | | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | | Phase 1 to Ground | | 11G | 11G | 11G | 11 | 4000+ | 550MΩ | 275MΩ |
| Amps 56.6 Amps | | Phase 2 to Ground | | 11G | 11G | 11G | 11 | 4000+ | 550MΩ | 275MΩ |
| HP 12 KW | | Phase 3 to Ground | | 11G | 11G | 11G | 11 | 4000+ | 550MΩ | 275MΩ |
| Breaker # M11-4 | | | | | | | | | | |

| | | | | | | | | | | |
|-----------------|--|-------------------|------|----------|-----------|-----------|--|-----------|-----------|-----------|
| Incinerator | | | | | | | | | | |
| Specs: | | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 240VAC | | Phase 1 to Ground | | 11G | 11G | 11G | | 220 | 550MΩ | 275MΩ |
| Breaker # M11-5 | | Phase 2 to Ground | | 11G | 11G | 11G | | 220 | 550MΩ | 275MΩ |

| | | | | | | | |
|-------------------|-----|-----|-----|--|--|-------|-------|
| Phase 3 to Ground | 11G | 11G | 11G | | | 550MΩ | 275MΩ |
|-------------------|-----|-----|-----|--|--|-------|-------|

Toaster Outlets

Specs:
Volts 240VAC
Amps 15 Amps
Cable Size
Breaker # M11-6

| | | | | | | | |
|-------------------|----------|-----------|-----------|--|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | 11G | 11G | 11G | | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | 11G | 11G | 11G | | 220 | 550MΩ | 275MΩ |
| Phase 3 to Ground | 11G | 11G | 11G | | 220 | 550MΩ | 275MΩ |

Drill Press

Specs:
Volts 240VAC
Amps 15 Amps
Breaker # M11-7

| | | | | | | | |
|-------------------|----------|-----------|-----------|--|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Phase 1 to Ground | 11G | 5G | 5G | | 220 | 550MΩ | 275MΩ |
| Phase 2 to Ground | 11G | 5G | 5G | | 220 | 550MΩ | 275MΩ |
| Phase 3 to Ground | 11G | 5G | 5G | | 220 | 550MΩ | 275MΩ |

120 Volt Semi-Essential MCC #1

Dwg Ref: 161-603-7 of 8

WARNING: Extreme caution should be used when
Megger Testing circuits that may support sensitive
electronic equipment. **DISCONNECT** the load before
continuing to crank the Megger or damage may result!

Canadian
Coast
Guard

Nav Lights Normal Supply M4-1

Specs: Parry Sound, ON
Volts 120VAC
Amps 11.5 Amps
Cable Size 3C#10
Breaker # M4-1

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 3 | 200M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Navigation Aids Panel #2

Specs:
Volts 120VAC
Amps 36 Amps
HP 3.5 KW
Cable Size 3C#8
Breaker # M4-2

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 3 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | 0 | 220M | 220M | NA | 220 | 220MΩ |
| Phase 1 to Phase 3 | 0 | 220M | 220M | NA | 220 | 220MΩ |
| Phase 2 to Phase 3 | 0 | 220M | 220M | NA | 220 | 220MΩ |

Lighting Panel M4-3 Wheelhouse

Specs:
Volts 120VAC
Amps 79.1 Amps
HP 5.4 KW
Cable Size 3C#8
Breaker # M4-3

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Lighting Panel M4-4 Focsle deck

Specs:
Volts 120VAC
Amps 56.6 Amps
HP 3.5 KW
Cable Size
Breaker # M4-4

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Lighting Panel M4-5 Boat deck

Specs:
Volts 120VAC
Amps 52.1 Amps
HP 5.2 KW
Cable Size
Breaker # M4-5

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Lighting Panel M4-6 Main deck

Specs:
Volts 120VAC
Amps 53 Amps
HP 8 KW
Cable Size
Breaker # M4-6

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Lighting Panel M4-7 Engine room

Specs:
Volts 120VAC
Amps 66.2 Amps
HP 8 KW
Cable Size
Breaker # M4-7

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 3 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 3 | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Phase 3 | 550M | 220M | 220M | 220M | 220 | 220MΩ |

E.R. 115V power panel M4-8

Specs:
Volts 120VAC
Amps 40.6 Amps
HP 5.5 KW
Cable Size
Breaker # M4-8

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Ventilation 115V Power Panel M4-9

Specs:
Volts 120VAC
Amps 30.1 Amps
HP 3.4 KW
Cable Size
Breaker # M4-9

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Galley 115V Power Panels M4-10/A/B

Specs:
Volts 120VAC

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

| | | | | | | | |
|-----------------|--------------------|------|------|------|------|-----|-------|
| Amps 148.6 Amps | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| HP 24.4 KW | Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Cable Size | Phase 1 to Phase 2 | 55M | 220M | 220M | 220M | 220 | 220MΩ |
| Breaker # M4-10 | Phase 1 to Phase 3 | 102M | 220M | 220M | 220M | 220 | 220MΩ |
| | Phase 2 to Phase 3 | 41M | 220M | 220M | 220M | 220 | 220MΩ |

Heated Windows & Wipers Panel M4-11

| | | | | | | | |
|-----------------|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Volts 120VAC | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Amps 85 Amps | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| HP 17 KW | Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Cable Size | Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Breaker # M4-11 | Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| | Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Boat Deck Ext. Receptacles M4-12

| | | | | | | | |
|-------------------|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Volts 120VAC | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Amps | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| HP 24.2 KW | Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Cable Size 3C#2/0 | Phase 1 to Phase 2 | | 220M | 220M | 220M | 220 | 220MΩ |
| Breaker # M4-12 | Phase 1 to Phase 3 | | 220M | 220M | 220M | 220 | 220MΩ |

| | | | | | | |
|--------------------|--|------|------|------|-----|-------|
| Phase 2 to Phase 3 | | 220M | 220M | 220M | 220 | 220MΩ |
|--------------------|--|------|------|------|-----|-------|

Panel M4-2

1. Time signal receivers

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

2. W/H console lights interior

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

3. Wempe clock & anemometer

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

4. Console Searchlight PLC supply

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

5. Echo sounder stbd

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

6. Hand held battery charger

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

7. Loran C

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

8. VHF direction finder

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

9. Doppler log

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

10. VHF-FM radio stbd

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

11. VHF-AM radio stbd

Test Results

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

12. Outlet by Thermostat

Test Results

(under cabinet by frig)

| | | | | | | |
|-------------------|--|-------------|-----------|-------------|-------------|-------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | | Electronics | | Electronics | Electronics | Electronics |

**13. Communications antenna system
Test Results**

| Date | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|-------------|-----------|-------------|-------------|-------------|
| Phase 1 to Ground | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | Electronics | | Electronics | Electronics | Electronics |

**14. Spare (old GRS radio outlet)
Test Results**

| Date | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|-------------|-----------|-------------|-------------|-------------|
| Phase 1 to Ground | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | Electronics | | Electronics | Electronics | Electronics |

**15 Fuel Computer
Test Results**

| Date | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|-------------|-----------|-------------|-------------|-------------|
| Phase 1 to Ground | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | Electronics | | Electronics | Electronics | Electronics |

**16. Blue SAR light
Test Results**

| Date | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|-------------|-----------|-------------|-------------|-------------|
| Phase 1 to Ground | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | Electronics | | Electronics | Electronics | Electronics |

**17. Data Cell Bridge
Test Results**

| Date | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|-------------|-----------|-------------|-------------|-------------|
| Phase 1 to Ground | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | Electronics | | Electronics | Electronics | Electronics |

**18. Outlet Fed by VHF
Test Results**

| Date | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|-------------|-----------|-------------|-------------|-------------|
| Phase 1 to Ground | Electronics | | Electronics | Electronics | Electronics |
| Phase 2 to Ground | Electronics | | Electronics | Electronics | Electronics |

**19. Stbd Console searchlight PLC supply
Test Results**

| Date | | | | | 9/20/2017 |
|-------------------|--|--|--|--|-------------|
| Phase 1 to Ground | | | | | Electronics |
| Phase 2 to Ground | | | | | Electronics |

Panel M4-3

**1. W/H lighting
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 90M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 90M | 220M | 220M | 220M | 220 | 220MΩ |

**2. W/H receptacles (comp.)
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 200M | 220M | 220M | 220M | 220 | 220MΩ |

**3. W/H & Bridge deck recp's
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 28MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 48MΩ |

**4. W/H coffee maker & M-sat
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**5. Focsle deck Itg.
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 15m | 220M | 6M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 15m | 220M | 6M | 220 | 220MΩ |

**6. Boat deck Itg.
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**7. Main deck bulwark Itg & recp's
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 17M | 1.5M | 1M | 10M | 0.11 | 1.3MΩ |
| Phase 2 to Ground | 17M | 1.5M | 220M | 10M | 220 | 220MΩ |

**8. Main deck bulwark Itg & recp's
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 6.5M | 32M | 220M | 110M | 220 | 220MΩ |
| Phase 2 to Ground | 6.5M | 32M | 3.5M | 110M | 2.4 | .78MΩ |

**9. Main mast & radar platform recp
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 40M | 85M | 100M | 96M | 163 | 33MΩ |
| Phase 2 to Ground | 40M | 85M | 100M | 96M | 198 | 220MΩ |

**10. Ventilation control panel #1
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 32M | 220M | 56M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 32M | 220M | 56M | 220 | 220MΩ |

Panel M4-3

**11. Pillar recp.
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**12. Remote temp. indicator recp.
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**13. CCTV recp's P&S
Test Results**

| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|--|-------------|-----------|------------|------------|------------|
| Phase 1 to Ground | | Electronics | | Electronic | Electronic | Electronic |
| Phase 2 to Ground | | Electronics | | Electronic | Electronic | Electronic |

**14. Aft Radar
Test Results**

| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|--|-------------|-----------|------------|------------|------------|
| Phase 1 to Ground | | Electronics | | Electronic | Electronic | Electronic |
| Phase 2 to Ground | | Electronics | | Electronic | Electronic | Electronic |

**15. Plug above chart table
Test Results**

| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|--|-------------|-----------|------------|------------|------------|
| Phase 1 to Ground | | Electronics | | Electronic | Electronic | Electronic |
| Phase 2 to Ground | | Electronics | | Electronic | Electronic | Electronic |

**16. Plug above chart table
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Panel M4-4

**1. Chief Eng., 1st officer & focsle deck Itg.
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**2. Captain, Senior Eng., 2nd Officer Itg.
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**3. Focsle deck corridor Itg.
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**4. Deck locker, fan & electronic room Itg & recp
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | .5M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | .5M | 220M | 220M | 220M | 220 | 220MΩ |

**5. Focsle deck corridor & stairwell recp's
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**6. Focsle deck outside recp's
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 6.5M | 220M | 1.6M | 220M | 220 | 4.3MΩ |
| Phase 2 to Ground | 6.5M | 220M | 1.6M | 220M | 220 | 4.3MΩ |

**7. Focsle deck drinking fountain
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**8. Chief Eng. & 1st Officer recp's and bunk Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 43 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 43 | 220MΩ |

**9. Captain, Senior Eng. & 2nd officer recp's
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 3M | 220M | 2.9M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 3M | 220M | 2.9M | 220 | 220MΩ |

**10. Officers cabins valance Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 44.3MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 44.3MΩ |

**11. Captain & Chief Eng. fridge recp's
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**12. Elect. Room Recp's
Test Results**

| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|-----|------------|-----------|------------|------------|------------|
| Phase 1 to Ground | N/A | Electronic | | Electronic | Electronic | Electronic |
| Phase 2 to Ground | N/A | Electronic | | Electronic | Electronic | Electronic |

**13. Modular recp.
Test Results**

| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|-----|------------|-----------|------------|------------|------------|
| Phase 1 to Ground | N/A | Electronic | | Electronic | Electronic | Electronic |
| Phase 2 to Ground | N/A | Electronic | | Electronic | Electronic | Electronic |

**14. 30 amp UPS supply
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 40M | 8/30/2012 | 40M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 40M | | 40M | 220M | 220 | 220MΩ |

15. UPS for Lan/Sat System

| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|--|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | | 110M | 110M | 110M | 1.3 | 1.6MΩ |

| | | | | | | |
|-------------------|--|------|------|------|-----|-------|
| Phase 2 to Ground | | 110M | 110M | 110M | 1.3 | 1.6MΩ |
|-------------------|--|------|------|------|-----|-------|

Panel M4-5

1. Port cabin Itg Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 2M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 2M | 220M | 220M | 220 | 220MΩ |

2. Engineers & officers Itg Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 2M | 220M | 7M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 2M | 220M | 7M | 220 | 220MΩ |

3. Cadets, Winchman, fwd stores Itg & recp's Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 25M | 220M | 5.4M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 25M | 220M | 5.4M | 220M | 220 | 220MΩ |

4. Eng's/ships office, w/closet & stewards locker Itg. Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 2M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 2M | 220M | 220M | 220 | 220MΩ |

5. Boat deck corridor Itg Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

6. ships office recp's Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

7. Boat deck corridor & stairwell recp's Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

8. Boat deck outside recp's & funnel casing Itg Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 95M | 220M | 220M | 220M | 23 | 1.04MΩ |
| Phase 2 to Ground | 95M | 220M | 220M | 220M | 23 | 1.04MΩ |

9. Bosun, cook & super recp's and bunk Itg Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 2M | 1M | 220M | 1.2 | 220MΩ |
| Phase 2 to Ground | 220M | 2M | 1M | 220M | 1.2 | 220MΩ |

10. Qtr masters, oilers & winchman recp's & bunk Itg Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 2M | 220M | 220M | 2.2 | 220MΩ |
| Phase 2 to Ground | 220M | 2M | 220M | 220M | 2.2 | 220MΩ |

11. 3rd Eng. & Deck Officers recp's & bunk Itg Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 2.6M | 2.8M | 2.5M | 220M | 1.3 | 34.3MΩ |
| Phase 2 to Ground | 2.6M | 2.8M | 2.5M | 220M | 1.3 | 34.3MΩ |

12. 2nd Eng., E/R Techs & Cadets recp's & bunk Itg Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 20M | 5M | 5M | 220M | 220 | 93.4MΩ |
| Phase 2 to Ground | 20M | 5M | 5M | 220M | 220 | 93.4MΩ |

13. Boat deck cabins valance Itg Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 22.5MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 22.5MΩ |

**14. Fwd hydr. P.P. control
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 25M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 25M | 220M | 220M | 220M | 220 | 220MΩ |

**15. Fwd hydr. P.P. control
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**16. Engineers office recp's
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Panel M4-6

**1. Officer mess, stewards, cook, seaman cabin Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 1.8M | 220 | 1.96MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 1.8M | 220 | 1.96MΩ |

**2. Officers mess recp's, decorative Itg & valance Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 0 | 2M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 0 | 2M | 220M | 220M | 220 | 220MΩ |

**3. Wash closets Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220m | 220M | 220M | 220M | 220 | 220MΩ |

**4. Galley & crew mess Itg.
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|--------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 2M | 220M | 220M | 220 | 220MΩ |
| Phase 1 to Phase 2 | | 2M | 220M | 220M | 220 | 220MΩ |

**5. Crews mess recp's, decorative Itg & valance Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 1.9M | 35M | 220M | 41M | 220 | 220MΩ |
| Phase 2 to Ground | 1.9M | 35M | 220M | 41M | 220 | 220MΩ |

**6. Canteen, deckhand, winchman cabin Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 6.41MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 6.41MΩ |

**7. Main deck corridor Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**8. Central stores, laundry room, deck & paint locker Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**9. Fwd stores, freezer & cooler Itg
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | .3M | 50M | 220M | 0.4M | 220 | 0.3MΩ |
| Phase 2 to Ground | .3M | 50M | 220M | 0.4M | 220 | 0.3MΩ |

**10. Maindeck corridors & stairwell recp's
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 100M | 220M | 220M | 220M | 220 | 220MΩ |

**11. Laundry room recp's
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 2 to Ground | 100M | 220M | 220M | 220M | 220 | 220MΩ |
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**12. Stewards, cook & seaman recp's & bunk Itg
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 3.8M | 2M | 220M | 2.6M | 220 | 3.52MΩ |
| Phase 2 to Ground | 3.8M | 2M | 220M | 2.6M | 220 | 3.52MΩ |

**13. Deckhand & tech. recp's & bunk Itg
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 1.6M | 4M | 220M | 220M | 4.6 | 2.8MΩ |
| Phase 2 to Ground | 1.6M | 4M | 220M | 220M | 4.6 | 2.8MΩ |

**14. Main deck cabins valance Itg
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 1.7M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 1.7M | 220M | 220M | 220M | 220 | 220MΩ |

**15. Entertainment system
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Panel M4-7

**1. E/R Itg stbd
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 55 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 55 | 220MΩ |

**2. E/R Itg port
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

**3. Cargo hold recp's & Itg
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 4.2M | 150M | 20M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 4.2M | 150M | 20M | 220M | 220 | 220MΩ |

**4. C/R & workshop Itg.
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

**5. E/R recp's
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 4.2M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 4.2M | 220M | 220 | 220MΩ |

**6. Control room recp's
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

**7. Main deck recp's
Test Results**

| | | | | | | |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Date | 07/09/201 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 2.7M | 2M | 200M | 0.06M, | 220 | 3.4MΩ |
| Phase 2 to Ground | 2.7M | 4M | 200M | 0.06M, | 220 | 3.4MΩ |

8. Workshop recp's & drinking fountain

| | | | | | | |
|------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|------|----------|-----------|-----------|-----------|-----------|-----------|

Test Results

| | | | | | | |
|-------------------|------|------|------|------|-----|-------|
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

9. Workshop bench recp's

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

10. Workshop bench recp's

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

11. SSG heater stbd

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

12. SSG heater port

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

13. C-2000 control panel

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

14. E/R grey water tank pump

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

15 OWS

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

16. Bearing Heater

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 550M | 220M | 220M | 220M | 220 | 220MΩ |

Panel M4-8

1. Aft hydr P.P. control

Test Results

| | | | | | | |
|-------------------|------------|-----------|-----------|-----------|-----------|-----------|
| Date | 07/09/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 30M | 220M | 220M | 220M | 3.7 | 2.61MΩ |
| Phase 2 to Ground | 30M | 220M | 220M | 220M | 3.7 | 2.63MΩ |

2. Aft hydr P.P. control

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 15M | 220M | 25M | 220M | 23 | 5.93MΩ |
| Phase 2 to Ground | 15M | 220M | 25M | 220M | 23 | 5.96MΩ |

3. Main winch hydr. P.P. control

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

4. Main winch hydr. P.P. control

Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

5. Domestic H/W circ. pump #2
Test Results

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

6. Domestic H/W circ. pump #1
Test Results

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

7. UV purifier & FW chemical pump
Test Results

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

8. E/R workshop recp's
Test Results

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 2.7M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 2.7M3 | 220 | 220MΩ |

9. E/R workshop ltg & recp's
Test Results

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

10. Fwd/aft hyd. P.P. & deck consoles
anti condensation htrs

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 5.6M | 220M | 220M | 220M | 220 | 1.93MΩ |
| Phase 2 to Ground | 5.6M | 220M | 220M | 220M | 220 | 1.93MΩ |

11. M/E J/W drain pump
Test Results

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | .5M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | .5M | 220M | 220 | 220MΩ |

12. Asea battery charger # 1
Test Results

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

13. Stern thruster control, Fuel bunkering
panel & shaft seal solenoids

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

14. new cable no identification
Test Results

| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|--|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | | Spare | 200M | 200M | 220 | 220MΩ |
| Phase 2 to Ground | | Spare | 200M | 200M | 220 | 220MΩ |

15. E/R ventilation control panel #2
Test Results

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | .2M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | .2M | 220M | 220 | 220MΩ |

16. Fuel management computer
Test Results

| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|--|------------|-----------|------------|------------|------------|
| Phase 1 to Ground | | Electronic | | Electronic | Electronic | Electronic |
| Phase 2 to Ground | | Electronic | | Electronic | Electronic | Electronic |

17. Fuel management computer exp. interface
Test Results

| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|--|------------|-----------|------------|------------|------------|
| Phase 1 to Ground | | Electronic | | Electronic | Electronic | Electronic |
| Phase 2 to Ground | | Electronic | | Electronic | Electronic | Electronic |

Panel M4-9

1. Fwd stores & bowthruster comp't exhaust fan
Test Results

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

**2. Laundry & central stores exhaust fan
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

**3. Deck workshop exhaust fan
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | .1M | 0.1m | | 220M | 220 | 220MΩ |
| Phase 2 to Ground | .1M | 0.1m | | 220M | 220 | 220MΩ |

**4. Sewage comp't exhaust fan
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

**5. MCR supply fan
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

**6. Spare - Cable coiled in crawl space
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | .1M | 0.8m | .1M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | .1M | 0.8m | .1M | 220M | 220 | 220MΩ |

**7. E/R unit heater fan port
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

**8. E/R unit heater fan stbd
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

**9. E/R unit heater fan midshipstbd
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

**10. Winch house unit heater fan
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 1.09MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

**11. Thermal Fluid Heater
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | .1M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | .1M | 220m | 220M | 220M | 220 | 220MΩ |

**12. Electronic air cleaner
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

Panel M4-10A

**1. Stbd Aft counter in galley
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

**2. Galley fridge/freezer
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 7.5M | 1.7m | 6M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 7.5M | 1.7m | | 220M | 220 | 220MΩ |

**3. Spare (Old Toaster #1)
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220m | 220M | 220M | 220 | 220MΩ |

4. Hot water dispenser

| | | | | | | |
|------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|------|----------|-----------|-----------|-----------|-----------|-----------|

Canal Marine Industrial Inc.
155 Cushman Road
St. Catharines, ON L2T 6T4
+1-905-685-9293
www.canal.ca

**19. Small Fridge Adjacent to Canteen
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

Panel M4-10B

**21. Canteen fridge
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**22. Fridge officer mess
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**23. Hot plate/ice machine officer mess
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**24. Toaster officer mess
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 4.3M | 220M | 220M | 220M | 10 | 220MΩ |
| Phase 2 to Ground | 4.3M | 220M | 220M | 220M | 10 | 220MΩ |

**25. Coffemaker officer mess
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**26. Recp under counter crew lounge
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**27. Recp behind bookcase crew lounge
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**28. Recp. behind TV crew lounge
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**29. TV under counter
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 50M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 50M | 220M | 220M | 220 | 220MΩ |

**30. Fountain officer mess
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**31. Fountain crews mess
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

**32. Waste disposal unit
Test Results**

| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

33. Gaylord vent. control panel
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 8.5M | 20M | 15M | 220M | 220 | 33.7MΩ |
| Phase 2 to Ground | 8.5M | 20M | 15M | 220M | 220 | 33.7MΩ |

34. Serving counter canteen
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ |

35. Refrigerated cold pan
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | na | 220MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | na | 220MΩ |

36. Spare
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 1.4m | 220 | 220MΩ |
| Phase 2 to Ground | 220M | 220M | | 1.4m | 220 | 220MΩ |

37. Spare
Test Results

| | | | | | | |
|-------------------|--|-----------|-----------|-----------|-----------|-----------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | | SPARE | | 220M | 220 | 220MΩ |
| Phase 2 to Ground | | SPARE | | 220M | 220 | 220MΩ |

38. Spare
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | CONNECTED | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | WITH | 220M | na | 220MΩ |
| Phase 2 to Ground | 220M | 220M | CABTYRE | 220M | na | 220MΩ |

Panel M4-11

1. Fwd window port
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 1.8M | 200M | 22M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 2.4M | 200M | 22M | 220 | 200MΩ |

2. Fwd window center
Test Results

| | | | | | | |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Date | 07/09/201 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 0.8M | 1M | 12M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 0.8M | 1M | 12M | 220 | 200MΩ |

3. Fwd window stbd
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 10M | 22M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 10M | 22M | 220M | 220 | 200MΩ |

4. Stbd wing fwd outbd
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 0.15M | 220M | 0.9M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 0.15M | 220M | 0.9M | 220 | 200MΩ |

5. Stbd wing fwd center
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 4M | 220M | 10M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 4M | 220M | 10M | 220 | 200MΩ |

6. Stbd wing fwd inbd
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 30.5M | 220M | 12M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 30.5M | 220M | 12M | 220 | 200MΩ |

7. Stbd wing aft
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |

8. Stbd & port wing aft
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 8.2M | 220M | 0.2M | 130 | 200MΩ |
| Phase 2 to Ground | 220M | 8.2M | 220M | 0.2M | 130 | 200MΩ |

9. Port wing aft
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 3.5M | 220M | 2M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 3.5M | 220M | 2M | 220 | 200MΩ |

10. Port wing fwd inbd
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 0.5M | 1M | 2.5M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 0.5M | 1M | 2.5M | 220 | 200MΩ |

11. Port wing fwd center
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 16M | 16M | 1.2M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 16M | 16M | 1.2M | 220 | 200MΩ |

12. Port wing fwd outbd
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 28M | 220M | 150M | 80 | 200MΩ |
| Phase 2 to Ground | 220M | 28M | 220M | 150M | 80 | 200MΩ |

13. Aft window
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |

14. Fwd window wipers
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |

15. Stbd wing wipers
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |

16. Port wing wipers
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |

17. Aft window
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|--|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | | 200MΩ |

18. Spare
Test Results

Not wired up

| | | | | | | |
|-------------------|------------|--|-----------|--|--|-----------|
| Date | DISCONNECT | | 8/17/2013 | | | 9/20/2017 |
| Phase 1 to Ground | | | | | | |
| Phase 2 to Ground | | | | | | |

Panel M4-12

1. Viewing deck stbd O.B. recp's

| | | | | | | |
|------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
|------|----------|-----------|-----------|-----------|-----------|-----------|

Test Results

| | | | | | | |
|-------------------|------|------|------|------|-----|-------|
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |

**2. QM station heater
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 5M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 5M | 220M | 220M | 220M | 220 | 200MΩ |

**3. Viewing deck stbd I.B. recp's
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |

**4. Fire locker heater
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |

**5. Viewing deck port I.B. recp's
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | .1M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | .1M | 220M | 220 | 200MΩ |

**6. Fire monitor platform recp's
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 135M | 180M | 60M | 220M | 3.4 | 28.9MΩ |
| Phase 2 to Ground | 135M | 180M | 60M | 220M | 3.4 | 28.9MΩ |

**7. Viewing deck port O.B. recp's
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 75M | 220M | 60M | 220M | 220 | 43.8MΩ |
| Phase 2 to Ground | 75M | 220M | 60M | 220M | 220 | 43.8MΩ |

**8. B.T. gearbox heater
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 150M | 220M | na | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 150M | 220M | na | 200MΩ |

**9. GMDSS Charger
Test Results**

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ |

**10. Bridge
Test Results**

| | | | | | | |
|-------------------|------------|-----------|-----------|-----------|-----------|------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | ELECTRONIC | | | | 220 | ELECTRONIC |
| Phase 2 to Ground | ELECTRONIC | | | | 220 | ELECTRONIC |

**11. GMDSS SATC
Test Results**

| | | | | | | |
|-------------------|------------|-----------|-----------|-----------|-----------|------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | ELECTRONIC | | | | 220 | ELECTRONIC |
| Phase 2 to Ground | ELECTRONIC | | | | 220 | ELECTRONIC |

**12. GMDSS HF/DSC
Test Results**

| | | | | | | |
|-------------------|------------|-----------|-----------|-----------|-----------|------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | ELECTRONIC | | | | 220 | ELECTRONIC |
| Phase 2 to Ground | ELECTRONIC | | | | 220 | ELECTRONIC |

**13. Spare
Test Results**

| | | | | | | |
|-------------------|------------|-----------|-----------|-----------|-----------|------------|
| Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | ELECTRONIC | | | | na | ELECTRONIC |
| Phase 2 to Ground | ELECTRONIC | | | | na | ELECTRONIC |

14. Bilge Lighting
Test Results

| | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 |
| Phase 1 to Ground | 220M | 140M | 220M | 220M | 220 | 200MΩ |
| Phase 2 to Ground | 220M | 140M | 220M | 220M | 220 | 200MΩ |

120 Volt Emergency Dist. Center

Dwg Ref: 161-603-7 of 8

WARNING: Extreme caution should be used when Megger Testing circuits that may support sensitive electronic equipment. DISCONNECT the load before continuing to crank the Megger or damage may result!

Canadian
Coast
Guard

VHF Transmitter/Receiver Q.M. Station

| | | | | | | | | |
|-------------------------------|-------------------|--|------------|-----------|------------|------------|------------|------------|
| Specs: Parry Sound, ON | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 120VAC | Phase 1 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| Amps 15 Amps | Phase 2 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| HP | Phase 3 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |

Cable Size 3C#12
Breaker # EI-1

Navigation Light Panel EI-2/M4-1

| | | | | | | | | |
|----------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 120VAC | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| Amps 11.5 Amps | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| HP 1.32 KW | | | | | | | | |

Cable Size 3C#10
Breaker # EI-2

Navigation Aids Panel #1 EI-3

| | | | | | | | | |
|---------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 120VAC | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | LEFT ON |
| Amps 36 Amps | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | LEFT ON |
| HP 7.5 KW | Phase 3 to Ground | | 220M | 220M | 220M | 220 | 200MΩ | LEFT ON |

Cable Size 3C#8
Breaker # EI-3

Spare

Breaker # E1-4

Lighting Panel E1-5 Main Deck

| | | | | | | | | |
|----------------|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 120VAC | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ | 220MΩ |
| Amps 41.6 Amps | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ | 220MΩ |
| HP 3.1 KW | Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 220MΩ | 220MΩ |

| | | | | | | | | |
|-----------------|--------------------|------|------|------|------|-----|-------|-------|
| Cable Size 3C#6 | Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 220MΩ | 220MΩ |
| Breaker # E1-5 | Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ | 220MΩ |
| | Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 220MΩ | 220MΩ |

Lighting Panel E1-6 Engine Room

| | | | | | | | | |
|-----------------|--------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 07/09/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 120VAC | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| Amps 53.1 Amps | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| HP 5.4 KW | Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| Cable Size 3C#4 | Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| Breaker # E1-6 | Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |

Lighting Panel E1-7 Flood Lights

| | | | | | | | | |
|-----------------|--------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Specs: | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Volts 120VAC | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| Amps 75.8 Amps | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| HP 5.4 KW | Phase 3 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| Cable Size 3C#2 | Phase 1 to Phase 2 | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| Breaker # E1-7 | Phase 1 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Phase 3 | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |

Spare

Breaker # E1-8

Spare

Breaker # E1-9

Spare

Breaker # E1-10

Panel E1-3

| | | | | | | | | |
|--|-------------------|----------|------------|-----------|------------|------------|------------|------------|
| 1. PBX UPS | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| 2. Radar X-Band 258kw TXRX/TU | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| 3. Fire & general alarm panel | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | 5M | 5M | 5M | 220M | 5 | 200MΩ | Electronic |
| | Phase 2 to Ground | 5M | 5M | 5M | 220M | 5 | 200MΩ | Electronic |
| 4. Internal communication system | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | 110M | 110M | 110M | 220M | 220 | 200MΩ | Electronic |
| | Phase 2 to Ground | 110M | 110M | 110M | 220M | 220 | 200MΩ | Electronic |
| 5. Outlet Deckhead (By VHF) | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | 110M | 110M | 110M | 220M | 220 | 200MΩ | Electronic |

| | | | | | | | | |
|--|-------------------|----------|------------|-----------|------------|------------|------------|------------|
| | Phase 2 to Ground | 110M | 110M | 110M | 220M | 220 | 200MΩ | Electronic |
| | | | | | | | | Electronic |
| 6. FWD Gyro Repeater Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 110M | 110M | 110M | 220M | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | 110M | 110M | 110M | 220M | Electronic | Electronic | Electronic |
| | | | | | | | | |
| 7 Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 0.1 | 110M | 64M | 220M | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | 0.1 | 110M | 64M | 220M | Electronic | Electronic | Electronic |
| | | | | | | | | |
| 8. HF-ssb radio port & CB & GPS Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| | | | | | | | | |
| 9. Echo sounder port & BCD contro Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 110M | 110M | | 220M | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | 110M | 110M | | 220M | Electronic | Electronic | Electronic |
| | | | | | | | | |
| 10. Rudder Angle Indicator Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | SPARE | | SPARE | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | SPARE | | SPARE | Electronic | Electronic | Electronic |
| | | | | | | | | |
| 11. Rudder Angle Indicator Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | SPARE | | SPARE | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | SPARE | | SPARE | Electronic | Electronic | Electronic |
| | | | | | | | | |
| 12. spare Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | Electronic | | Electronic | na | 200MΩ | Electronic |
| | Phase 2 to Ground | | Electronic | | Electronic | na | 200MΩ | Electronic |
| | | | | | | | | |
| 13. Compass lt, fire door hold back, Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 110M | 110M | | 70M | 220 | 200MΩ | Electronic |
| | Phase 2 to Ground | 110M | 110M | | 70M | 220 | 200MΩ | Electronic |
| | | | | | | | | |
| 14. spare Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | Electronic | | Electronic | na | 200MΩ | Electronic |
| | Phase 2 to Ground | | Electronic | | Electronic | na | 200MΩ | Electronic |
| | | | | | | | | |
| 15. Icebreaking siren & beacons Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 110M | 110M | 200M | 220M | 220 | 200MΩ | Electronic |
| | Phase 2 to Ground | 2.1M | 15M | 56M | 220M | 220 | 9.13MΩ | Electronic |
| | | | | | | | | |
| 16. Auto Pilot & helm order Ind back Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| | | | | | | | | |
| 17. Airchime Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 3.2M | 18M | | 12M | 80 | 20.3MΩ | Electronic |
| | Phase 2 to Ground | 10M | 18M | | 12M | 19 | 11.9MΩ | Electronic |
| | | | | | | | | |
| 18. Radar s-band 30 kW TX RX Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |

| | | | | | | | |
|-------------------|--|------------|--|------------|------------|------------|------------|
| Phase 2 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
|-------------------|--|------------|--|------------|------------|------------|------------|

Panel E1-5

| | | | | | | | | |
|--|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1. Focsle deck corridor, stairwell & i | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 2. Boat deck stairwells & corridors l | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 3. Incinerator, emerg. gen comp't, d | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 0 | 0.1M | 0 | 0.04 | 220 | 0.3MΩ | 0.2MΩ |
| | Phase 2 to Ground | 0 | 0.1M | 0 | 0.04 | 220 | 0.3MΩ | 0.2MΩ |
| 4. Galley, crews/officers mess & cer | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | .4M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | .4M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 5. Main deck corridors, stairwells, E | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 6. Winch house recp's & ltg | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 7. Emerg. gen. comp,t & winch hous | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 8. Emerg. gen. jacket water & anti c | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 9. Tow pin solenoids & davit motor | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 63MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 63MΩ | 275MΩ |

Panel E1-6

| | | | | | | | | |
|--|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1. E/R & shaft tunnel recp's & ltg stk | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 2. MCR, workshop, sewage comp't i | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 2M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 2M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 3. Cargo hold, tunnel & steering flat | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 190M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 190M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 4. E/R recp's | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |

| | | | | | | | | |
|---|-------------------|----------|------------|-----------|------------|-----------|-----------|-----------|
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 5. Main deck & qtr. master stations Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 21M | 220M | 220M | 6M | 220 | 1.8MΩ | 2.2MΩ |
| | Phase 2 to Ground | 21M | 220M | 220M | 6M | 220 | 1.8MΩ | 2.4MΩ |
| 6. Thrusters starters & shaft swbd/ Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 7. MCR swbd & MCC ltg & SSG anti Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 2M | 2M | | 220M | 220 | 2.26MΩ | 275MΩ |
| | Phase 2 to Ground | 2M | 2M | | 220M | 220 | 2.26MΩ | 275MΩ |
| 8. Watertight doors ind. & emerg. fir Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 9. Ship service 24 VDC battery char Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 10. ASEA E/R console Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | Electronic | | Electronic | 220 | 200MΩ | 110MΩ |
| | Phase 2 to Ground | | Electronic | | Electronic | 220 | 200MΩ | 110MΩ |
| 11. ASEA E/R console Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | Electronic | | Electronic | 220 | 200MΩ | 110MΩ |
| | Phase 2 to Ground | | Electronic | | Electronic | 220 | 200MΩ | 110MΩ |
| 12. E/R & shaft tunnel recp's & ltg p Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 13. Cargo hold, steering comp't & b Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 14. Auto pilot MSI panel elect. room Test Results | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | | Electronic | | Electronic | 220 | 200MΩ | SPARE |
| | Phase 2 to Ground | | Electronic | | Electronic | 220 | 200MΩ | SPARE |
| 15. Asea battery charger #2 Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 16. Shore power take up reel Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 220M | 220M | 2.2M | 220M | 220 | 0.3MΩ | 275MΩ |
| | Phase 2 to Ground | 220M | 220M | 2.2M | 220M | 220 | 0.3MΩ | 275MΩ |
| 17. E/R, steering comp't, MCR & bo Test Results | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 1 to Ground | 145M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 145M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |

| | | | | | | | | |
|------------------------------------|-------------------|----------|------------|-----------|------------|------------|------------|------------|
| Phase 1 to Phase 2 | | | | | | | | |
| | | | | | | | | |
| 18. Emerg. ventilation & pump shut | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | 170 | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | 170 | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | | | | | | | | |
| 19. FARV unit | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Test Results | | | | | | | |
| | Phase 1 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | Electronic | | Electronic | Electronic | Electronic | Electronic |

Panel E1-7

| | | | | | | | | | |
|--------------------------------------|-------------------|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1. W/H recp's & Itg | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 1.2M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 1.2M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 2. 1000W flood aft stbd | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | | 220M | 220 | 200MΩ | 30MΩ |
| 3. 1000W flood aft port | | | | | 220M | | | | |
| Test Results | Phase 1 to Ground | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 4. 1000W HPS flood aft stbd | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 200MΩ |
| 5. 1000W HPS flood aft stbd | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 6. 1000W HPS flood aft port | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 7. 1000W HPS flood aft port | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 8. 250W quartz floods-focsle deck f | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| 9. 250W quartz floods-W/H fwd & m | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 93MΩ |
| 10. 500W quartz floods-life boat sta | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |

| | | | | | | | | | |
|--|---------------------|------|----------|-----------|-----------|------------|------------|------------|------------|
| | | | | | | | | | |
| 11. 500W quartz floods-life boat sta | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | | | | | | | | | |
| 12. 250W quartz floods-insignia & n | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 5.8MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 185M | | 220M | 220 | 5.8MΩ | 3MΩ |
| | | | | | | | | | |
| 13. Bridge deck ltg | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | | | | | | | | | |
| 14. Control info. console sound pov | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | | | | | | | | | |
| 15. Refrigerator | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | Phase 2 to Ground | | 220M | 220M | 220M | 220M | 220 | 200MΩ | 275MΩ |
| | | | | | | | | | |
| 16. UPS | | Date | | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | | SPARE | | SPARE | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | | SPARE | | SPARE | Electronic | Electronic | Electronic |
| | | | | | | | | | |
| 17. ECPINS Port Console. | | Date | 9/7/2011 | 8/30/2012 | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | .01M | 110M | 110M | Electronic | Electronic | Electronic | Electronic |
| | RADAR BATTERY PACK? | | .01M | 110M | 110M | Electronic | Electronic | Electronic | Electronic |
| | | | | | | | | | |
| 18. Radar Isolation Trans | | Date | | | | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | | | | Electronic | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | | | | Electronic | Electronic | Electronic | Electronic |
| | | | | | | | | | |
| 19. Gyro Repeaters Port, Stbd, and | | Date | | | | | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| Test Results | Phase 1 to Ground | | | | | | Electronic | Electronic | Electronic |
| | Phase 2 to Ground | | | | | | Electronic | Electronic | Electronic |

| | | | | | | | | | | | | |
|------------------------------------|------------|----------|---------------|--------------|--------------|----|----------|-----------|-----------|-----------|-----------|-----------|
| Wheelhouse | | | | | | | | | | | | |
| PMC Navigation Light Control Panel | | 120 Volt | | | | | | | | | | |
| | | | | | | | | | | | | |
| B | | reading | 2015 Reading | 2016 Reading | 2017 Reading | A | | 8/17/2013 | 10/7/2015 | 1/11/2016 | 9/20/2017 | 11/1/2018 |
| 14 | NL17-14A | 150M | 220M | 220 | 47MΩ | 14 | NL17-14A | 150M | 220M | 59 | 33MΩ | 275MΩ |
| | NL17-14B | 150M | adian Coast G | 220 | 46MΩ | | NL17-14B | 150M | 220M | 59 | 31MΩ | 275MΩ |
| 13 | NL17-13A | 220M | 220M | 220 | 65MΩ | 13 | NL17-13A | | 220M | | NC | NC |
| | Parry Sour | 220M | 220M | 220 | 61MΩ | | NL17-13B | | 220M | | NC | NC |
| 12 | NL17-12A | 220M | 220M | 220 | 96MΩ | 12 | NL17-12A | 220M | 220M | 220 | 107MΩ | 3MΩ |
| | NL17-12B | 220M | 220M | 220 | 104MΩ | | NL17-12B | 220M | 220M | 220 | 106MΩ | 275MΩ |
| 11 | NL1-11A | 1.3M | 8M | 220 | 6.3MΩ | 11 | NL2-11A | 1.3M | 20M | 220 | 24MΩ | 275MΩ |
| | NL1-11B | 220M | 8M | 220 | 6.3MΩ | | NL2-11B | 2.8M | 20M | 60 | 20.8MΩ | 275MΩ |
| 10 | NL1-10A | 220M | 220M | 220 | 200MΩ | 10 | NL2-10A | 220M | 220M | 57 | 83MΩ | 275MΩ |
| | NL1-10B | 130M | 220M | 220 | 192MΩ | | NL2-10B | 130M | 220M | 140 | 81MΩ | 275MΩ |
| 9 | NL1-9A | 220M | 220M | 220 | 110MΩ | 9 | NL2-9A | 220M | 220M | 133 | 102MΩ | 275MΩ |
| | NL1-9B | 220M | 220M | 220 | 103MΩ | | NL2-9B | 220M | 220M | 220 | 93MΩ | 275MΩ |
| 8 | NL1-8A | 220M | 220M | 220 | 81MΩ | 8 | NL2-8A | 220M | 220M | 220 | 109MΩ | 275MΩ |
| | NL1-8B | 220M | 220M | 220 | 79MΩ | | NL2-8B | 220M | 220M | 220 | 106MΩ | 275MΩ |
| 7 | NL1-7A | 220 M | 220 M | 220 | 125MΩ | 7 | NL2-7A | 220M | 220M | 220 | 131MΩ | 275MΩ |
| | NL1-7B | 220M | 220M | 220 | 122MΩ | | NL2-7B | 220M | 220M | 220 | 125MΩ | 275MΩ |
| 6 | NL1-6A | 180M | 220M | 220 | 120MΩ | 6 | NL2-6A | 180M | 220M | 220 | 121MΩ | 275MΩ |
| | NL1-6B | 140M | 220M | 220 | 116MΩ | | NL2-6B | 140M | 220M | 220 | 116MΩ | 275MΩ |
| 5 | NL1-5A | 200M | 200M | 220 | 127MΩ | 5 | NL3-5A | 200M | 220M | 55 | 176MΩ | 275MΩ |
| | NL1-5B | 200M | 200M | 220 | 121MΩ | | NL3-5B | 200M | 220M | 78 | 172MΩ | 275MΩ |
| 4 | NL1-4A | 180M | 220M | 220 | 22MΩ | 4 | NL14-4A | 180M | 220M | 146 | 28MΩ | 275MΩ |
| | NL1-4B | 220M | 220M | 220 | 22MΩ | | NL14-4B | 220M | 220M | 144 | 27MΩ | 275MΩ |
| 3 | NL1-3A | 220M | 220M | 220 | 98MΩ | 3 | NL16-3A | 220M | 30M | 30 | 111MΩ | 275MΩ |
| | NL1-3B | 220M | 220M | 220 | 99MΩ | | NL16-3B | 220M | 30M | 30 | 108MΩ | 275MΩ |
| 2 | NL1-2A | 75M | 30M | 130 | 1MΩ | 2 | NL15-2A | 75M | 60M | 90 | 2MΩ | 2MΩ |
| | NL1-2B | 220M | 30M | 111 | 1MΩ | | NL15-2B | 220M | 60M | 90 | 2MΩ | 2MΩ |
| 1 | NL1-1A | 220M | 0.7M | 66 | 70MΩ | 1 | | | | | | |
| | NL1-1B | 220M | 0.7M | 108 | 71MΩ | | | | | | | |