



FCC TITLE 47 PART 25 ISED RSS-170 ISSUE 4

TEST AND MEASUREMENT REPORT

For

Somewear Labs, Inc.

350 Brannan Street, Suite 350,
San Francisco, CA 94107, USA

FCC ID: 2AQYN-SWL3
IC: 24246-SWL3

Report Type: Original Report		Product Type: Satellite Communication Device	
Prepared By	Arturo Reyes Test Engineer 		
Report Number	R2604272-25		
Report Date	2026-06-16		
Reviewed By	Christian McCaig RF Lead Engineer 		
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by A2LA*, NIST, or any agency of the Federal Government.

* This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "*" (Rev.2)

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R2604272-25	Original report	2026-06-16

1 General Description

1.1 Product Description for Equipment Under Test (EUT)

This test and measurement report was prepared on behalf of *Somewear Labs, Inc.*, and their product model: SWL-3, with FCC ID: 2AQYN-SWL3 and IC: 24246-SWL3, a Satellite Communication Device with Iridium radio module, or the “EUT” as referred to in this report.

Original results are used in cases of leveraging original module certification. After spot checking to ensure the power is consistent with original certifications, it was determined that original test reports accurately represent test results under the new conditions.

HVIN: SWL-3

1.2 Mechanical Description of EUT

The UUT measures approximately 11.2 cm (L) x 5.2 cm (W) x 2 cm (H) and weighs approximately less than 1 kg.

The data gathered was from a production sample provided by Somewear Labs, Inc. with S/N: F0124AQ10030.

1.3 Objective

This report is prepared on behalf of *Somewear Labs, Inc.*, in accordance with Title 47, Part 25 of the Federal Communication Commission’s rules and ISEDC RSS 170.

The objective was to verify output power with FCC Part 25 and ISEDC RSS-170 for the Iridium Module used in the device

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the immunity should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing and/or I/O cable changes, etc.).

1.4 Related Submittal(s)/Grant(s)

FCC Part 15.247, RSS-247, Equipment Class: DTS with FCC ID: 2AQYN-SWL3 and IC: 24246-SWL3.

1.5 Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47, Chapter I, Sub-part B, Part 25 and ISEDC RSS 170.

Applicable Standards ANSI C63.26-2015:

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 or 1 meters.

1.6 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Parameter	Measurement uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.57 dB
Power Spectral Density, conducted	±1.48dB
Unwanted Emissions, conducted	±1.57dB
All emissions, radiated	±4.0 dB
AC power line Conducted Emission	±2.0 dB
Temperature	±2 ° C
Humidity	±5 %
DC and low frequency voltages	±1.0 %
Time	±2 %
Duty Cycle	±3 %

1.7 Test Facility Registrations

BACLs test facilities that are used to perform Radiated and Conducted Emissions tests are currently recognized by the Federal Communications Commission as Accredited with NIST Designation Number US1129.

BACL's test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with Industry Canada under Registration Numbers: 3062A.

BACL is a Chinese Taipei Bureau of Standards Metrology and Inspection (BSMI) validated Conformity Assessment Body (CAB), under Appendix B, Phase I Procedures of the APEC Mutual Recognition Arrangement (MRA). BACL's BSMI Lab Code Number is: SL2-IN-E-1002R

BACL's test facilities that are used to perform AC Line Conducted Emissions, Telecommunications Line Conducted Emissions, Radiated Emissions from 30 MHz to 1 GHz, and Radiated Emissions from 1 GHz to 6 GHz are currently recognized as Accredited in accordance with the Voluntary Control Council for Interference [VCCI] Article 15 procedures under Registration Number A-0428.

1.8 Test Facility Accreditations

Bay Area Compliance Laboratories Corp. (BACL) is:

A- An independent, 3rd-Party, Commercial Test Laboratory accredited to ISO/IEC 17025:2017 by A2LA (Test Laboratory Accreditation Certificate Number 3297.02), in the fields of: Electromagnetic Compatibility and Telecommunications. Unless noted by an Asterisk (*) in the Compliance Matrix (See Section 3 of this Test Report), BACL's ISO/IEC 17025:2017 Scope of Accreditation includes all of the Test Method Standards and/or the Product Family Standards detailed in this Test Report..

BACL's ISO/IEC 17025:2017 Scope of Accreditation includes a comprehensive suite of EMC Emissions, EMC Immunity, Radio/Wireless, RF Exposure, Safety, and Wireline Telecommunications test methods applicable to a wide range of product categories. These product categories include, but are not limited to: Central Office Telecommunications Equipment [including NEBS – Network Equipment Building

Systems], Information Technology Equipment (ITE); Telecommunications Terminal Equipment (TTE); Medical Electrical Equipment; Industrial, Scientific and Medical Test Equipment; Professional Audio and Video Equipment; Industrial Equipment, Scientific Instruments and Laboratory Apparatus; Cable Distribution Systems, Railway Equipment, Marine Equipment, and Energy Efficient Lighting. Additionally, BACL offers comprehensive test capabilities for both Unlicensed and Licensed Wireless and RF Devices, per the requirements of the FCC (USA), ISED Canada (Canada), the EU/EEA/EFTA Nations (per the ETSI Standards applicable under the Radio Equipment Directive), Singapore, MIC (Japan), South Korea, Vietnam, and Taiwan ROC.

B- A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.03) to certify

- For the USA (Federal Communications Commission):

- 1- All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
- 2- All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
- 3- All Telephone Terminal Equipment within FCC Scope C.

- For the Canada (Innovation, Science and Economic Development Canada):

- 1 All Scope 1-Licence-Exempt Radio Frequency Devices;
- 2 All Scope 2-Licensed Personal Mobile Radio Services;
- 3 All Scope 3-Licensed General Mobile & Fixed Radio Services;
- 4 All Scope 4-Licensed Maritime & Aviation Radio Services;
- 5 All Scope 5-Licensed Fixed Microwave Radio Services
- 6 All Broadcasting Equipment Technical Standards (BETS) in the Category I Equipment Standards List.
7. RSS-HAC Radio Scope 6 Hearing Aid Compatibility and Volume Control

- For Singapore (Info-Comm Media Development Authority (IMDA)):

- 1 All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase I
2. All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase II

- For the Hong Kong Special Administrative Region & (Office of the Communications Authority-OFCA) – APEC Tel MRA- Phase I and Phase II:

- 1 Radio Equipment, per KHCA 10XX-series Specifications; HKCA 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1010, 1015, 1016, 1019, 1020, 1022, 1026, 1033, 1034, 1035, 1036, 1037, 1039, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1052, 1053, 1054, 1056, 1057, 1061, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1080, 1081
- 2 GMDSS Marine Radio Equipment, per HKCA 12XX-series Specifications; HKCA 1218, 1223, 1224, 1225, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1277, 1281, 1282, 1283
- 3 Fixed Network Equipment, per HKCA 20XX-series Specifications; HKCA 2001, 2011, 2014, 2015, 2017, 2026, 2027, 2028, 2029, 2030, 2031

- For Japan:

- 1 MIC Telecommunication Business Law (Terminal Equipment):
 - All Scope A1 - Terminal Equipment for the Purpose of Calls;
 - All Scope A2 - Other Terminal Equipment
- 2 Radio Law (Radio Equipment):
 - All Scope B1 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
 - All Scope B2 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
 - All Scope B3 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law

C- A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.01) to certify Products to USA's Environmental Protection Agency (EPA) ENERGY STAR Product Specifications for:

- 1 Appliances:
 - for Clothes Washers (ver. 8.1)
 - for Residential Dishwashers (ver. 6.0)
 - for Residential Refrigerators and/or Freezers (ver. 5.0)
- 2 Commercial Food Service Equipment:
 - for Commercial Dishwashers (ver. 3.0)
 - for Commercial Ice Machines (ver. 3.0)
- 3 Data Center Equipment:
 - for Large Network Equipment (ver. 1.1)
- 4 Electronics and Office Equipment:
 - for Audio/Video Equipment (ver. 3.0)
 - for Computers (ver. 8.0)
 - for Data Center Storage (ver. 2.1)
 - for Displays (ver. 8.0)
 - for Enterprise Servers (ver. 4.0)
 - for Imaging Equipment (ver. 3.1)
 - for Set-top Boxes & Cable Boxes (ver. 5.1)
 - for Small Network Equipment (ver. 1.0)
 - for Telephony (ver. 3.0)
 - for Televisions (ver. 9.0), Title 10 Chapter II CFR Part 430 Subpart B –Appendix BB, Title 10 Chapter II CFR Part 430 Subpart B –Appendix DD
- 3 Lighting and Fans
 - for Decorative Light Strings (ver. 1.5)
 - for Downlights (ver. 1.0)
 - for Lamps (Light Bulbs)(ver. 2.1)
 - for Luminaires (including sub-components) (ver. 2.2)
 - for Residential Ceiling Fans (ver. 4.0)
 - for Residential Ventilating Fans (ver. 4.1)
- 4 Other
 - for Residential Ceiling Fans (ver. 4.0)
 - for Electric Vehicle Supply Equipment (ver. 1.2)(Electric Vehicle Supply Equipment Final Test Method for DC-output EVSE Rev March 2021)
 - for Water Coolers (ver. 3.0)
 - for Smart Home Energy Management Systems (ver. 1.1)

D- A NIST Designated Phase-I and Phase-II Conformity Assessment Body (CAB) for the following economies and regulatory authorities under the terms of the stated MRAs/Treaties:

1. For the USA (Federal Communications Commission), as a Telecommunications Certification Body (TCB):
 - o All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
 - o All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
 - o All Telephone Terminal Equipment within FCC Scope C.
2. Canada (ISED Canada) Foreign Certification Body – FCB – APEC Tel MRA -Phase I & Phase II:
 - o Phase I Designation Letter

- Phase II ISED Canada recognition as a Product Certification Body for unlicensed wireless devices, licensed radios, radars, etc.:
- 3. For Singapore (InfoComm Media Development Authority (IMDA)) APEC Tel MRA -Phase I & Phase II:
 - All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase I
 - All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase II
- 4. For the Hong Kong Special Administrative Region & (Office of the Communications Authority – OFCA) – APEC Tel MRA -Phase I & Phase II:
 - NIST Phase I Scope Recognition Letter from OFCA for BACL –US0057
 - OFCA Phase II Designation Letter
- 5. For Japan (Ministry of Communications):
 - NIST Japan Recognition
 - MIC Telecommunication Business Law (Terminal Equipment):
 - 1. All Scope A1 – Terminal Equipment for the Purpose of Calls;
 - 2. All Scope A2 – Other Terminal Equipment
 - Radio Law (Radio Equipment):
 - 1. All Scope B1 – Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
 - 2. All Scope B2 – Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
 - 3. All Scope B3 – Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law
 - Japan VCCI – Voluntary Control Council for Interference US-Japan Telecom Treaty (VCCI Side Letter)
 - 1. VCCI Certificate
 - Japan Registered Certification Body
 - 1. RCB Recognition Letter
- 6. European Union:
 - Radio Equipment Directive [RED] 2014/53/EU US-EU EMC & Telecom MRA CAB (NB)
 - EMC Directive [EMCD] 2014/30/EU US-EU EMC & Telecom MRA CAB (NB):
- 7. Australia ACMA (Australian Communication and Media Authority) – APEC Tel MRA -Phase I:
 - Phase I Designation Letter
- 8. Chinese Taipei (Republic of China – Taiwan):
 - NCC (National Communications Commission) APEC Tel MRA -Phase I
- 9. Republic of Korea (Ministry of Communications – Radio Research Laboratory) APEC Tel MRA -Phase I:
 - NIST Phase I Scope Update Notification Letter from Korea for BACL
- 10. Vietnam APEC Tel MRA -Phase I (page 13)
 - Vietnam (MIC) NIST Phase I Scope
- 11. Indonesia SDPPI (page 6)
 - Phase I Listing

12. Israel Phase I
 - NIST Phase I Scope Update Recognition Letter from Israel for BACL –US0057
 13. UK Radio and EMC NIST Designation Letters
 - UK website: <https://www.gov.uk/uk-market-conformity-assessment-bodies/bay-area-compliance-laboratories-corp-bacl>
 1. Electromagnetic Compatibility Regulations (SI 2016/1091)
https://assets.publishing.service.gov.uk/media/5fe1e344e90e07452fce4e5a/AB_1313_BACL_UK_EMC_Regs_NIST_Designation_Extended.pdf
 2. Radio Equipment Regulations 2017 (SI 2017/1206)
https://assets.publishing.service.gov.uk/media/5fe1e351e90e074525bf7be6/AB_1313_BACL_UK_Radio_Regs_NIST_Designation_Extended.pdf
 14. IFT Mexico Phase I
 - NIST Phase I New Recognition Letter from Mexico for BACL – US0057
 15. Taiwan (BSMI) Phase 1 Designation Letter and designation form.
 - NIST Phase I Scope Update Designation Letter to BSMI for BACL – US0057
- NIST Phase I Scope Update Designation Form to BSMI for BACL – US0057

2 System Test Configuration

2.1 Justification

The EUT was configured for testing according to ANSI C63.26-2015:

2.2 EUT Exercise Software

The EUT was transmitting using TeraTerm.

TX:

Frequency (MHz)	Power
1616	Default

2.3 Equipment Modifications

None.

2.4 Power Supply

Manufacturer	Description	Model	Serial Number
Triad	Switching Mode Power Supply	824WSU120-2000	WSU120-2000

2.5 Local Support Equipment

Manufacturer	Description	Model	Serial Number
Dell	Laptop	Latitude 5401	-

2.6 Interface Ports and Cabling

Cable Description	Length (m)	From	To
USB C to USB C	< 1	Laptop	EUT
12-pin power adapter	> 1	Switching Mode Power Supply	EUT

3 Summary of Test Results

Results reported relate only to the product tested.

Rules	Description of Test	Results	Note
FCC CFR 47 Part 25.204 ISED RSS-170 Clause 5.5	Output Power	Compliant ¹	Refer to Original report page 29
FCC CFR 47 Part 25.202d, 2.1055 ISED RSS-170 Clause 5.3	Frequency Tolerance	Compliant ¹	Refer to Original report page 11
FCC CFR 47 Part 25.202f, ISED RSS-170 Clause 5.8	Emission Limitations	Compliant ¹	Refer to Original report pages 14- 26
FCC CFR 47 Part 2.1047d	Modulation Characteristics	Compliant ¹	Refer to Original report pages 31- 32
FCC CFR 47 Part 2.1049 ISED RSS-170 Clause 5.2	Occupied Bandwidth	Compliant ¹	Refer to Original report pages 40- 41
FCC CFR 47 Part 25.216 ISED RSS-170 Clause 5.9, 5.10	Limits on Emissions from Mobile Earth Stations for Protection of Aeronautical Radionavigation-Satellite Service	Compliant ¹	Refer to Original report pages 34- 38

Note¹: for original data, please refer to original certification for FCC ID: Q639603N, IC: 4629A-9603N, Document 75926443 Report 05 Issue 2.

Note: device is MES equipment

BACL is responsible for all the information provided in this report, except when information is provided by the customer as identified in this report. Information provided by the customer, e.g., antenna gain, can affect the validity of results.

4 FCC 47 CFR §25.204, ISEDC RSS-170 §5.5– Power Limits for earth stations

4.1 Applicable Standards

As per FCC 25.204:

In bands shared coequally with terrestrial radio communication services, the equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station, other than an ESV, operating in frequency bands between 1 and 15 GHz, shall not exceed the following limits except as provided for in paragraph (c) of this section:

+ 40 dBW in any 4 kHz band for $\theta \leq 0^\circ$

+ 40 + 30 dBW in any 4 kHz band for $0^\circ < \theta \leq 5^\circ$

As per ISEDC RSS-170 Clause 5.5:

The application for MES certification shall state the e.i.r.p. that the MES must have for satisfactory communication. The maximum permissible e.i.r.p. will be the stated e.i.r.p. plus a 2 dB margin. If a detachable antenna is used, the application for certification shall state the recommended antenna type and manufacturer, the antenna gain, and the maximum transmitter output power at the antenna terminal.

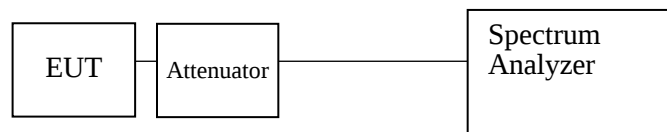
4.2 Test Procedure

For conducted power, the EUT was connected to a spectrum analyzer via a cable and attenuator. The path loss was measured using a spectrum analyzer and added as an offset to the measurement.

The spectrum analyzer was configured with an RBW of 3 kHz and VBW of 10 kHz. $10\text{Log}(4/3) = 1.25$ dB was added to the reference level offset to make the result relative to a 4 kHz band as per the requirement in 25.204(a).

The transmit power was measured over the active part of the burst using a peak detector, the spectrum analyzer was set to max hold and the peak result recorded.

4.3 Test Setup Diagram



4.4 Test Environmental Conditions

Temperature:	20 °C
Relative Humidity:	43 %
ATM Pressure:	101.8 kPa

The testing was performed by Arturo Reyes on 2026-05-26 at RF area.

4.5 Test Equipment List and Details

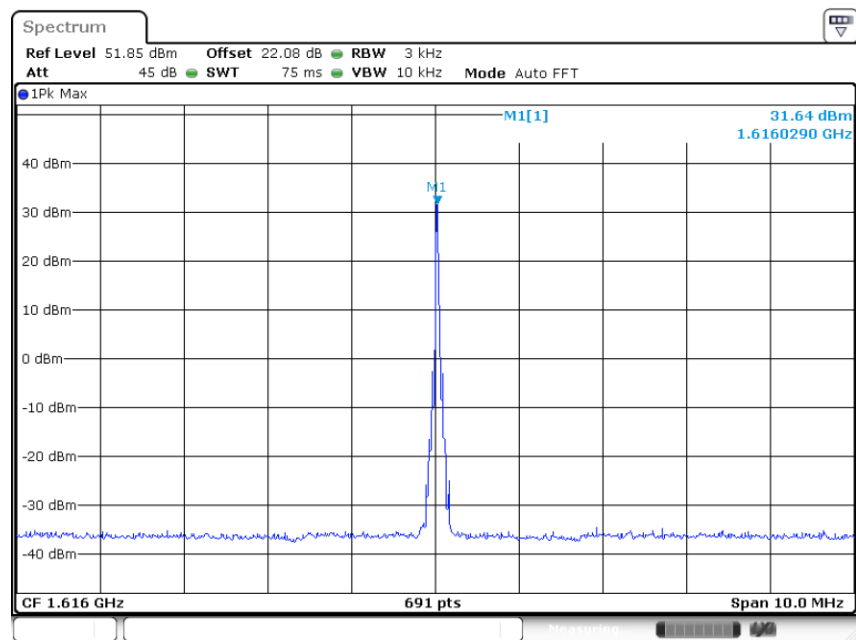
BACL No	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
921	Rhode & Schwarz	Signal Analyzer	FSV40	1321.3008k39-101203-UW	2025-08-04	1 year
1585	-	SMA 24in RF cable	ST18/SMAM/SMAM/24	245210	2026-03-19	6 months
1540	-	Attenuator, SMA	MCL BW-S20W5	-	2025-12-18	1 year

Statement of Traceability: **BACL Corp.** attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".

4.6 Test Results

Frequency (MHz)	Output Power (dBW/4kHz)	Previous Output Power (dBW/4kHz)
1616	1.64	2.25

Please refer to below graph for test data:



Project Number: R2604272; Tester Name: Arturo R.
Date: 26.MAY.2026 22:26:52

Note: Offset accounts for path loss (20.83dB) and RBW conversion ($10 \cdot \log(4/3) = 1.25\text{dB}$)
dBW = dBm – 30dB

Note: purpose is for spot check to ensure similar to same as original certification

5 Annex A - EUT External Photographs

Please refer to the attachment

6 Annex B - EUT Internal Photographs

Please refer to the attachment

7 Annex C (Normative) - A2LA Electrical Testing Certificate**Accredited Laboratory**

A2LA has accredited

BAY AREA COMPLIANCE LABORATORIES CORP.

Sunnyvale, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets A2LA R222 - Specific Requirements EPA ENERGY STAR Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system [refer to joint ISO-ILAC-IAF Communiqué dated April 2017].

Presented this 13th day of September 2024.

A handwritten signature in blue ink, appearing to read 'Trace McInturff'.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3297.02
Valid to September 30, 2026

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

Please follow the web link below for a full ISO 17025 scope

<https://www.a2la.org/scopepdf/3297-02.pdf>

--- END OF REPORT ---