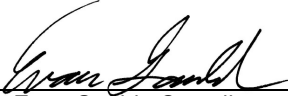
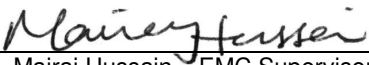




Test Report



Curtis-Straus LLC, a wholly owned subsidiary of BV CPS

| | |
|---------------------|---|
| Report No | EJ1561-2 |
| Client | Wavemark Rich Leitermann |
| Address | 1 Monarch Drive Littleton, MA 01460 |
| Phone | (978) 431-1633 |
| Item tested | 6-Channel Multiplexer |
| Standards | FCC Part 15 Section 15.225 |
| FCC ID | UQY-HF1000A |
| FRN | 0013630066 |
| Test Dates | November 17, 2009 |
| Results | As detailed within this report |
| Prepared by |  Evan Gould – Compliance Engineer |
| Authorized by |  Mairaj Hussain – EMC Supervisor |
| Issue Date | <u>1/7/10</u> |
| Conditions of Issue | This Test Report is issued subject to the conditions stated in the 'Conditions of Testing' section on page 12 of this report. |

Curtis-Straus LLC is accredited by the American Association for Laboratory Accreditation for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation.



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Summary

On November 17, 2009 we tested HF1500D for compliance with the following requirements:

EMC Emissions:

- FCC 47 CFR Part 15 for following tests only:
 - Section 15.225 (a), (b), (c) and (d)
 - Section 15.207 - AC Mains Conducted Emission
 - Section 15.209 – Spurious Radiated Emission

Registration numbers for all open area test sites can be found in the *Test Equipment Used* Section starting on page 12.

The purpose of this test report is to support a class II permissive change to a previously approved Limited Module (FCC ID UQY-HF1000A). The 6-Channel Multiplexer assembly contains a Feig RFID Reader.

The class II permissive change is requested because Wavemark intends to add the radio module with limited modular approval to the following new host chassis:

- HF1500D
- HF1500
- HFH1500
- HFH1500D

The HF1500D was tested as representative of the new group of host cabinets.

Release Control Record

| Issue No. | Reason for change | Date Issued |
|-----------|-------------------|-------------------|
| 1 | Original Release | November 20, 2008 |



Test Methodology

Radiated emission testing was performed according to the procedures specified in ANSI C63.4 (2003). Emissions were maximized by rotating the system around its vertical axis as well as varying the test antenna's height and polarity. The EUT was tested in a representative host device HF1500D. A separate test report has been issued to cover the verification requirement of the digital portion of the product.

| | | |
|-------------------------------|-------------------|-------------------|
| Frequency range investigated: | 0.009MHz – 150MHz | |
| Measurement distance: | 0.15 - 30MHz | Conducted |
| | 0.009 – 30MHz | 3m (loop antenna) |
| | 30MHz – 150MHz | 3m |

AC Line conducted emissions testing was performed with a 50Ω/50μH LISN.

The EUT was tested while installed in the HF1500D host product. Six different EUT antenna heights were represented, and each antenna was continuously adjusted along its full horizontal range of motion. This maximization of the individual antennas was combined with full 360° rotation of the host product. The EUT was only tested in floor standing orientation on a rotating turn table. The testing revealed that the topmost antenna position was worst-case, and the measurements included in this report were taken with the topmost antenna radiating.

The testing performed in the HF1500D host is representative of the EUT being installed in the other three possible host products as well (HF1500, HFH1500, and HFH1500D). This is the case because all of these products use the same material and construction for their sidewalls. The three configurations also do not differ as far as their electrical and/or digital components either.

All readings are peak unless otherwise specified on the respective table.

Rich Leitermann from Wavemark was present during the testing. The test sample was received in good condition.

Release Control Record

| Issue No. | Reason for change | Date Issued |
|-----------|-------------------|-------------------|
| 1 | Original Release | November 20, 2008 |

Product Tested - Configuration Documentation

| EUT Configuration | | | | | | | | | | | |
|---|-----------|--------------|----------------|------------|----------|------------------|--------|------------|------------------|--------------------|--|
| Work Order: J1561 Company: Wavemark Company Address: 1 Monarch Drive, Suite 104 Littleton, MA 01460 Contact: Rich Leiternann Person Present: Rich Leiternann | | | | | | | | | | | |
| | | | MN | | | PN | | | SN | | |
| EUT: | | | HF1500D | | | HF15702 | | | | | |
| 1st alternate AULT 12VDC p/s: | | | MW174KB1203F01 | | | - | | | | | |
| 2nd alternate GlobTek, Inc. p/s: | | | GTM21097-5012 | | | RoHS300908138/09 | | | | | |
| EUT Description: | | | HF1500D | | | | | | | | |
| EUT Max Frequency: | | | 200MHz | | | | | | | | |
| Support Equipment: | | | MN | | | SN | | | | | |
| Lenovo laptop | | | X61 | | | - | | | | | |
| D-Link ethernet switch | | | DIR-615 | | | F3BK385015564 | | | | | |
| EUT Ports: | | | | | | | | | | | |
| Port Label | Port Type | No. of ports | No. Populated | Cable Type | Shielded | Ferrites | Length | Max Length | In/Out NEBS Type | Unpopulated Reason | |
| Ethernet | RJ45 | 1 | All | Cat. 5 | No | None | 20ft | 100m | Indoor | NA | |
| AC Power | AC Power | 1 | All | AC Power | No | None | 6ft | 100m | Indoor | NA | |
| DC Power | DC Power | 1 | All | DC Power | No | 1 molded | 1m | 1m | Indoor | NA | |
| Serial | DB9 | 1 | None | NA | NA | NA | NA | NA | NA | Setup/Diag | |
| Software / Operating Mode Description: | | | | | | | | | | | |
| Antennas are actively reading RFID tags. | | | | | | | | | | | |



Statement of Conformity

The 6-Channel Multiplexer has been found to conform to the following parts of 47 CFR as detailed below:

| Part 15 | Comments |
|------------------|--|
| 15.205 15.209 | The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209. |
| 15.207 | The unit meets the AC conducted emissions requirements of 15.207. |
| 15.225(a-d) | The unit complies with these requirements as shown in this test report. |

Test Results

Fundamental Measurement

LIMITS

| Frequency Range (MHz) | Limit @ 30m (µV/m) | Limit @ 30m (dBµV/m) |
|--------------------------------|--------------------|----------------------|
| 13.553-13.567 | 15,848 | 83.9 |
| 13.410-13.553 13.567-13.710 | 334 | 50.4 |
| 13.110-13.410 13.710-14.010 | 106 | 40.5 |

[15.225(a-c)]

MEASUREMENTS

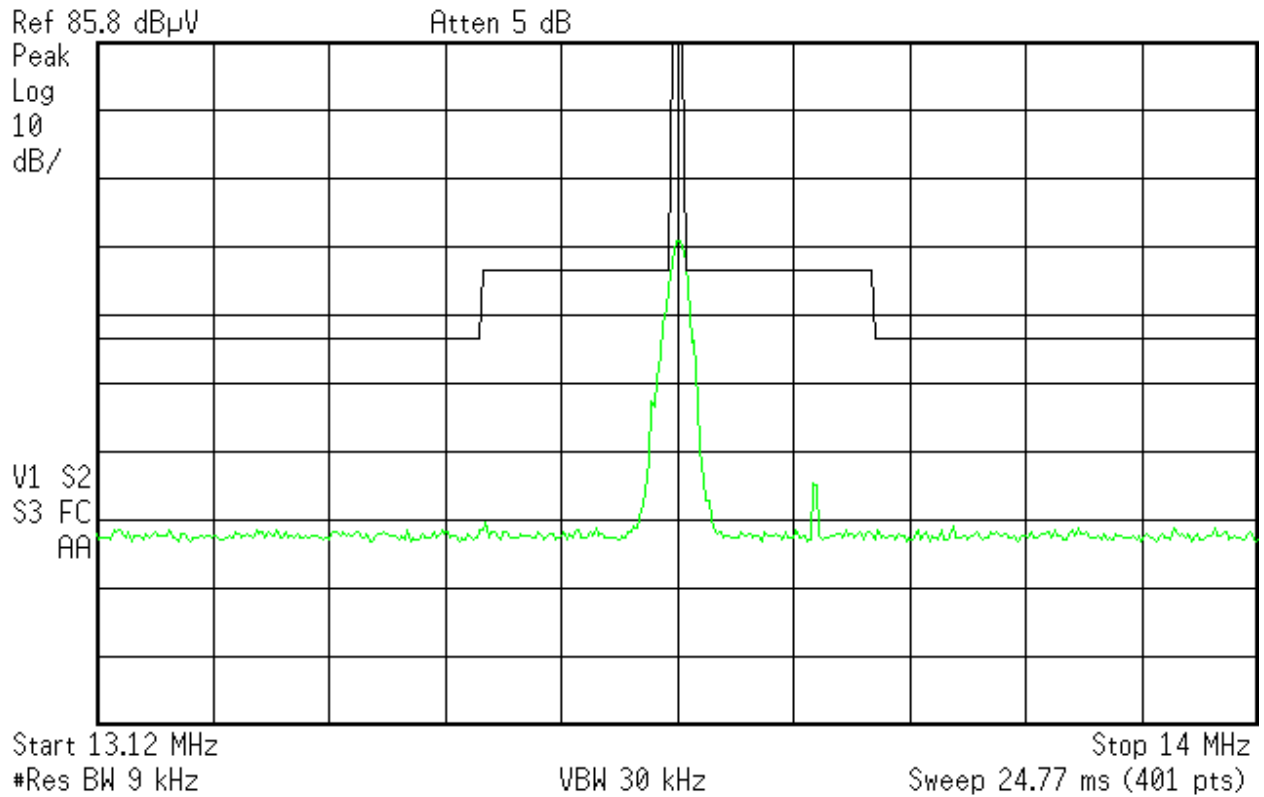
| Radiated Emissions Table | | | | | | | | | | |
|--|-----------------|---------------------------------|--------------------|-----------------------|--|------------------------------|---------------------------|----------------------------|-------------|--------------------|
| Date: 17-Nov-09 | | Company: Wavemark | | | Work Order: J1561 | | | | | |
| Engineer: Evan Gould | | EUT Desc: 6-Channel Multiplexer | | | EUT Operating Voltage/Frequency: 120V / 60Hz | | | | | |
| Temp: 23.2°C | | Humidity: 30% | | | Pressure: 1017mBar | | | | | |
| Frequency Range: 13.56MHz | | | | | Measurement Distance: 3 m | | | | | |
| Notes: Installed in HF1500D | | | | | RBW: 9kHz | | | | | |
| Distance Factor = 40log(30m/3m) = 40dB | | | | | VBW: 30kHz | | | | | |
| Antenna Polarization (0° - 90°) | Frequency (MHz) | Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Distance Factor (dB) | Adjusted Reading (dBµV/m) | 47 CFR 15.225(a) 30m Limit | | |
| | | | | | | | | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| 0 | 13.56 | 56.7 | 0.0 | 38.0 | 0.2 | 40.0 | 54.9 | 83.9 | -29.0 | Pass |
| Table Result: Pass | | | by -29.0 dB | | | Worst Freq: 13.56 MHz | | | | |
| Test Site: EMI Chamber 2 | | Cable 1: Asset #1506 | | | Cable 2: Asset #1508 | | | | | |
| Analyzer: Gold | | Preamp: none | | | Antenna: 5m Loop (high) | | | | | |



ANALYZER PLOT

Agilent 10:35:44 Nov 17, 2009

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Radiated Spurious Emissions

LIMITS

“The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209” [15.225(d)]

MEASUREMENTS

| Radiated Emissions Table | | | | | | | | | |
|-------------------------------------|-----------------|---------------------------------|----------------------|-----------------------|---------------------------|--|----------------|-------------|--------------------|
| Date: 17-Nov-09 | | Company: Wavemark | | | | Work Order: J1561 | | | |
| Engineer: Evan Gould | | EUT Desc: 6-Channel Multiplexer | | | | EUT Operating Voltage/Frequency: 120V / 60Hz | | | |
| Temp: 23.2°C | | Humidity: 30% | | | | Pressure: 1017mBar | | | |
| Frequency Range: 9kHz - 30MHz | | | | | Measurement Distance: 3 m | | | | |
| Notes: Installed in HF1500D | | | | | | | | RBW: 9kHz | |
| | | | | | | | | VBW: 30kHz | |
| Antenna Polarization (0° - 90°) | Frequency (MHz) | Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Reading (dBµA/m) | Limit (dBµA/m) | Margin (dB) | Result (Pass/Fail) |
| No spurious emissions were detected | | | | | | | | | |
| Test Site: EMI Chamber 2 | | | Cable 1: Asset #1506 | | | Cable 2: Asset #1508 | | | |
| Analyzer: Gold | | | Preamp: none | | | Antenna: Sm Loop (high) | | | |

| Radiated Emissions Table | | | | | | | | | |
|---|-----------------|---------------------------------|----------------------|-----------------------|---------------------------|--|------------------|-------------|--------------------|
| Date: 17-Nov-09 | | Company: Wavemark | | | | Work Order: J1561 | | | |
| Engineer: Evan Gould | | EUT Desc: 6-Channel Multiplexer | | | | EUT Operating Voltage/Frequency: 120V / 60Hz | | | |
| Temp: 23.2°C | | Humidity: 30% | | | | Pressure: 1017mBar | | | |
| Frequency Range: 30 - 150MHz | | | | | Measurement Distance: 3 m | | | | |
| Notes: Installed in HF1500D | | | | | | | | RBW: 120kHz | |
| | | | | | | | | VBW: 300kHz | |
| Antenna Polarization (H / V) | Frequency (MHz) | Reading (dBµV) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Reading (dBµV/m) | 47 CFR 15.209(a) | | |
| | | | | | | | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| V | 40.68 | 43.5 | 25.3 | 14.3 | 0.4 | 32.9 | 40.0 | -7.1 | Pass |
| V | 54.2 | 44.8 | 25.3 | 7.9 | 0.4 | 27.8 | 40.0 | -12.2 | Pass |
| V | 67.8 | 37.8 | 25.2 | 8.4 | 0.5 | 21.5 | 40.0 | -18.5 | Pass |
| V | 81.4 | 48.0 | 25.2 | 8.2 | 0.5 | 31.5 | 40.0 | -8.5 | Pass |
| V | 94.9 | 41.6 | 25.1 | 8.9 | 0.5 | 25.9 | 43.5 | -17.6 | Pass |
| V | 122.0 | 33.0 | 25.1 | 14.2 | 0.6 | 22.7 | 43.5 | -20.8 | Pass |
| Table Result: Pass by -7.1 dB Worst Freq: 40.68 MHz | | | | | | | | | |
| Test Site: EMI Chamber 2 | | | Cable 1: Asset #1506 | | | Cable 2: Asset #1508 | | | |
| Analyzer: Gold | | | Preamp: Black | | | Antenna: Red-White | | | |



AC Line Conducted Emission Measurements
LIMITS

| Frequency of emission (MHz) | Quasi-peak limit (dBµV) | Average limit (dBµV) |
|-----------------------------|-------------------------|----------------------|
| 0.15-0.5 | 66 to 56* | 56 to 46* |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

*Decreases with the logarithm of the frequency.

[47 CFR 15.207(a)]

MEASUREMENTS

| AC Mains Conducted Emissions | | | | | | | | | | |
|---|---------------|------------|---------------------------------|------------|-----------------------|--|--------------|------------------|---------------|----------------------------|
| Date: 17-Nov-09 | | | Company: Wavemark | | | Work Order: J1561 | | | | |
| Engineer: Evan Gould | | | EUT Desc: 6-Channel Multiplexer | | | Test Site: CEMI-4 | | | | |
| Temp: 19.5 °C | | | Humidity: 33% | | | Pressure: 1017mBar | | | | |
| Notes: Installed in HF1500D w/ AULT DC supply | | | | | | EUT Operating Voltage/Frequency: 120V / 60Hz | | | | |
| Measurement Device: Green LISN | | | | | | Spectrum Analyzer: Black | | | | |
| Range: 0.15-30MHz | | | | | | Spectrum Analyzer: Black | | | | |
| Frequency (MHz) | Q.P. Readings | | Ave. Readings | | Impedance Factor (dB) | FCC/CISPR B | | FCC/CISPR B | | Overall Result (Pass/Fail) |
| | QP1 (dBµV) | QP2 (dBµV) | AV1 (dBµV) | AV2 (dBµV) | | qp Limit (dBµV) | qp Margin dB | AVE Limit (dBµV) | AVE Margin dB | |
| 0.30 | 23.2 | 22.1 | 19.9 | 20.9 | 20.1 | 60.2 | -16.9 | 50.2 | -9.2 | Pass |
| 8.00 | 21.3 | 20.7 | 18.4 | 18.0 | 20.2 | 60.0 | -18.5 | 50.0 | -11.4 | Pass |
| 11.30 | 25.4 | 24.6 | 20.5 | 21.0 | 20.2 | 60.0 | -14.4 | 50.0 | -8.8 | Pass |
| 16.00 | 18.7 | 20.1 | 11.0 | 14.0 | 20.4 | 60.0 | -19.5 | 50.0 | -15.6 | Pass |
| 24.50 | 16.8 | 18.7 | 11.7 | 14.1 | 20.8 | 60.0 | -20.5 | 50.0 | -15.1 | Pass |
| 25.80 | 18.0 | 19.4 | 9.9 | 13.2 | 20.8 | 60.0 | -19.8 | 50.0 | -16.0 | Pass |
| Table Result: Pass by -8.80 dB | | | | | | Worst Freq: 11.30 MHz | | | | |

| AC Mains Conducted Emissions | | | | | | | | | | |
|---|---------------|------------|---------------------------------|------------|-----------------------|--|--------------|------------------|---------------|----------------------------|
| Date: 17-Nov-09 | | | Company: Wavemark | | | Work Order: J1561 | | | | |
| Engineer: Evan Gould | | | EUT Desc: 6-Channel Multiplexer | | | Test Site: CEMI-4 | | | | |
| Temp: 19.5 °C | | | Humidity: 33% | | | Pressure: 1017mBar | | | | |
| Notes: Installed in HF1500D w/ GlobTek supply | | | | | | EUT Operating Voltage/Frequency: 120V / 60Hz | | | | |
| Measurement Device: Green LISN | | | | | | Spectrum Analyzer: Black | | | | |
| Range: 0.15-30MHz | | | | | | Spectrum Analyzer: Black | | | | |
| Frequency (MHz) | Q.P. Readings | | Ave. Readings | | Impedance Factor (dB) | FCC/CISPR B | | FCC/CISPR B | | Overall Result (Pass/Fail) |
| | QP1 (dBµV) | QP2 (dBµV) | AV1 (dBµV) | AV2 (dBµV) | | qp Limit (dBµV) | qp Margin dB | AVE Limit (dBµV) | AVE Margin dB | |
| 0.23 | 27.5 | 19.2 | 11.6 | 15.8 | 20.2 | 62.4 | -14.7 | 52.4 | -16.4 | Pass |
| 0.30 | 23.9 | 22.0 | 23.3 | 20.1 | 20.1 | 60.2 | -16.2 | 50.2 | -6.8 | Pass |
| 0.78 | 18.9 | 19.2 | 13.9 | 15.8 | 20.1 | 56.0 | -16.7 | 46.0 | -10.1 | Pass |
| 13.60 | 12.8 | 14.5 | 4.3 | 4.8 | 20.3 | 60.0 | -25.2 | 50.0 | -24.9 | Pass |
| 21.00 | 33.8 | 33.8 | 27.1 | 25.4 | 20.6 | 60.0 | -5.6 | 50.0 | -2.3 | Pass |
| 24.70 | 24.6 | 24.1 | 23.0 | 16.8 | 20.8 | 60.0 | -14.6 | 50.0 | -6.2 | Pass |
| 26.90 | 21.9 | 21.4 | 12.0 | 13.0 | 20.9 | 60.0 | -17.2 | 50.0 | -16.1 | Pass |
| Table Result: Pass by -2.30 dB | | | | | | Worst Freq: 21.00 MHz | | | | |



Test Equipment Used

REV. 11-NOV-2009

| SPECTRUM ANALYZERS / RECEIVERS / PRESELECTORS | | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
|--|--|----------------|------------------|-------------------|------------|-----------------|-----------------|-----------------|
| BLACK | | 9kHz-12.8GHz | 8596E | Agilent | 3710A00944 | 00337 | I | 18-SEP-2010 |
| GOLD | | 100Hz-26.5 GHz | E4407B | Agilent | MY45113816 | 1284 | I | 14-AUG-2010 |
| LISNs/MEASUREMENT PROBES | | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| GREEN LISN | | 9kHz-50MHz | 8012-50-R-24-BNC | SOLAR | 0411658 | 00987 | I | 11-FEB-2010 |
| RADIATED EMISSIONS SITES | | | FCC CODE | IC CODE | VCCI CODE | CAT | CALIBRATION DUE | |
| EMI CHAMBER 2 | | | 719150 | 2762A-7 | R-3033 | I | 15-FEB-2011 | |
| CONDUCTED TEST SITES (MAINS / TELCO) | | | FCC CODE | VCCI CODE | CAT | CALIBRATION DUE | | |
| CEMI 4 | | | 719150 | C-3363, T-1578 | III | NA | | |
| PREAMPS / COUPLERS ATTENUATORS / FILTERS | | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| BLACK | | 0.009-2000MHz | ZFL-1000-LN | CS | N/A | 00799 | II | 06-NOV-2010 |
| ANTENNAS | | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| RED-WHITE BILOG | | 30-2000MHz | JB1 | SUNOL | A091604-1 | 01105 | I | 17 DEC-2010 |
| SMALL LOOP | | 10kHz-30MHz | PLA-130/A | ARA | 1024 | 00755 | I | 05-MAR-2010 |
| METEOROLOGICAL METERS | | | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| WEATHER CLOCK (PRESSURE ONLY) | | | BA928 | OREGON SCIENTIFIC | C3166-1 | 00831 | I | 17-MAR-2011 |
| CEMI4 THERMOHYGROMETER | | | 35519-044 | CONTROL COMPANY | 72457728 | 1339 | II | 18-AUG-2011 |
| CHAMBER2 THERMOHYGROMETER | | | 35519-044 | CONTROL COMPANY | 72457639 | 1347 | II | 18-AUG-2011 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Conditions Of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("Client"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "Conditions"):

1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("Test Report") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.
2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.
3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.
4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.
5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "BUREAU VERITAS," "BUREAU VERITAS CONSUMER PRODUCTS SERVICES," "BVCPS," "MTL," "ACTS," "MTL-ACTS" and "CURTIS-STRAUS" (collectively, the "Marks") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.
6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.
7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
8. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.
10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services, (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.
11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only where such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.
12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.

13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.

14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.

15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B) NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.\$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

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