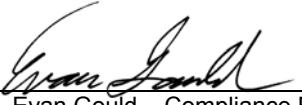




CURTIS-STRaus

Test Report

Report No	EH0790-2
Client	Scully Signal Company 70 Industrial Way Wilmington, MA 01887
Phone	617-897-7938
FRN	0017861352
Models	09601, 09602, 09603, 09605
FCC ID	GMHSENSOR
Equipment Type Equipment Code	Part 15 Security/Remote Control Transmitter DSC
Results	As detailed within this report
Prepared by	 _____ Evan Gould – Compliance Engineer
Authorized by	 _____ Mairaj Hussain – EMC Supervisor
Issue Date	6/25/08
Conditions of Issue	This Test Report is issued subject to the conditions stated in the 'Conditions of Testing' section on page 14 of this report.

Curtis-Straus LLC is accredited to ISO/IEC 17025 by A2LA for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation. Any opinions or interpretations expressed in this report are outside the scope of our A2LA accreditation as A2LA only accredits testing.

Curtis-Straus • 527 Great Road • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



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Summary

This test report supports an application for certification of a transmitter operating pursuant to 47 CFR 15.231. The product is the Scully Signal SculCom Sensor. Its operating frequency is 433.9MHz, employing a 1.25" monopole antenna.

The model numbers to be included in this application are the following:

<u>Model</u>	<u>Description</u>	<u>Microprocessor input</u>
09601	Sensor Tank Unit	Reed Relay
09602	Sensor Temperature Unit	Thermistor
09603	Sensor Burner Lockout Unit	External dry contacts
09605	O Sensor Tank Unit Outdoor	Reed Relay

These units have identical electronics with the exception of the input to the microprocessor. The microprocessor and radio logic is identical.

Test Methodology

Testing was performed according to ANSI C63.4-2003. Radiated emissions were maximized by rotating the device around its three orthogonal axes, as well as varying the test antenna's height and polarity. Fresh batteries were used for testing.

Frequency range investigated: 30MHz – 5GHz

Measurement distance: 30-1000MHz 3m
1-5GHz 3m

Both the receiver portion of this device, and the associated digital circuitry are subject to the Verification authorization procedure. A separate test report has been issued to Scully Signal Company in order to cover this requirement.

Products Tested - Configuration Documentation

EUT Configuration

Work Order: H0790
Company: Scully Signal Company
pany Address: 70 Industrial Way
Wilmington, MA 01887
Contact: John Pope

MN	SN			
EUT: 09603	1			
EUT Description: Sculcom Sensor				
EUT Max Frequency: 433.92MHz				
Support Equipment:				
MN	SN			
None				
EUT Cables:	Qty	Shielded?	Length	Ferrites
Burnout Lockout	1	No	12ft	None
Populated EUT Ports:		Qty	Reason	
JB1		1	Programming only	
Hardware / Operating Mode Description:				
EUT is a Transmitter operating at 433.92MHz at 19.2kbps data rate, using FSK modulation. During normal operation EUT transmits three 20ms pulses approximately every 2 hours.				

EUT Configuration

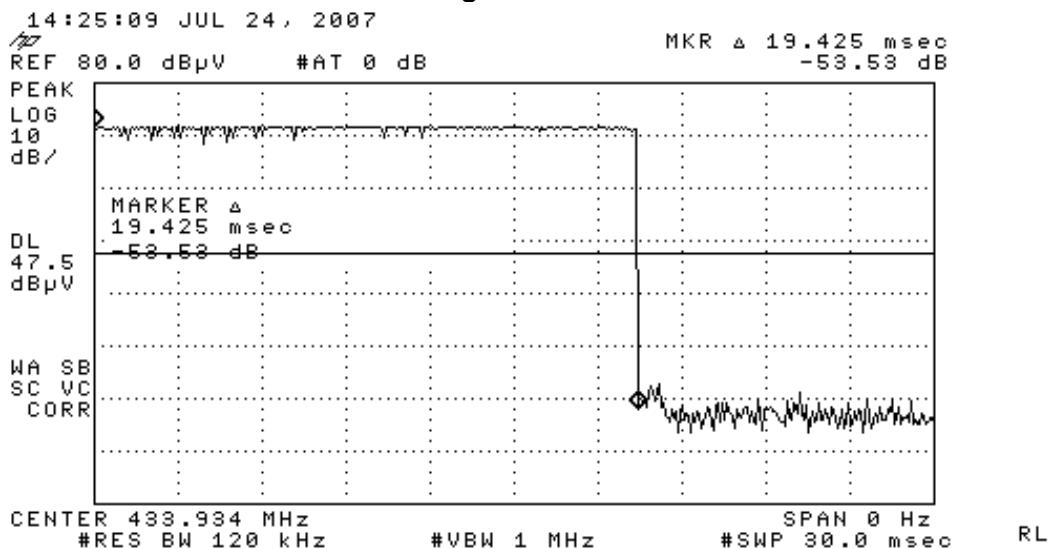
Work Order: H0790
Company: Scully Signal Company
Company Address: 70 Industrial Way
Wilmington, MA 01887
Contact: John Pope

MN	SN			
EUT: 09601	B00012 (normal modulation)			
09601	B00015 (CW mode)			
EUT Description: SculCom Sensor				
EUT Max Frequency: 433.92MHz				
Support Equipment:	MN	SN		
None				
EUT Cables:	Qty	Shielded?	Length	Ferrites
None				
Unpopulated EUT Ports:	Qty	Reason		
JB1	1	Programming only		
Software / Operating Mode Description:				
EUT is a Transmitter operating at 433.92MHz at 19.2kbps data rate, using FSK modulation.				
Under normal operation EUT transmits three 20ms pulses approximately every 2 hours.				

Duty Cycle

"Intentional radiators operating under the provisions of this Section shall demonstrate compliance with the limits on the field strength of emissions, as shown in [15.231(b)], based on the average value of the measured emissions...If average emission measurements are employed, the provisions in Section 15.35 for averaging pulsed emissions and for limiting peak emissions apply." [15.231(b)(2)]

Single Pulse Width



EUT transmits one 20ms pulse every 20s three times in a row. Either in response to a sensed level change or (in the absence of a level change) a supervisory transmission every 2hrs.

Duty Cycle Averaging Factor = $20 \times \log(20\text{ms}/100\text{ms}) = -14\text{dB}$

Fundamental Emission

LIMIT

“...the field strength of emissions from intentional radiators operated under this Section shall not exceed the following:”

<i>Fundamental Frequency</i>	<i>Field Strength of Fundamental (microvolts/meter)</i>	<i>Field Strength of Spurious Emissions (microvolts/meter)</i>
260 - 470 MHz	3,750 to 12,500**	375 to 1,250**

** linear interpolations
[15.231(b)]

$$Limit = 20 \times \log(41.6667(Freq[MHz]) - 7083.3333\mu V)$$

$$Limit = 20 \times \log(41.6667(433.9) - 7083.3333\mu V)$$

$$Limit = 20 \times \log(10,995.84\mu V) = 80.8 \text{ dB}\mu V/\text{m} @ 3\text{m}$$

MEASUREMENT

Radiated Emissions Table								Curtis-Straus LLC						
Date: 25-Jul-07				Company: Scully Signal Company				Work Order: H0790						
Engineer: Evan Gould								EUT Desc: SculCom 09601						
Frequency Range: 30-1000MHz								Measurement Distance: 3 m						
Antenna Polarization (H / V)	Frequency (MHz)	Reading (dB\mu V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Duty Cycle Factor (dB)	Adjusted Reading (dB\mu V/m)	47 CFR 15.231(b)						
Hpk	433.9	73.2	0.0	17.3	3.6	0.0	94.1	100.8	-6.7	Pass				
Hav	433.9	73.2	0.0	17.3	3.6	14.0	80.1	80.8	-0.7	Pass				
Table Result: Pass by -0.7 dB								Worst Freq: 433.9 MHz						
Test Site: "M"		Pre-Amp: none		Cable: EMIR-16		Analyzer: Blue		Antenna: Green						

Radiated Emissions Table								Curtis-Straus LLC						
Date: 25-Jul-07				Company: Scully Signal Company				Work Order: H0790						
Engineer: Evan Gould								EUT Desc: SculCom 09603						
Frequency Range: 30-1000MHz								Measurement Distance: 3 m						
Antenna Polarization (H / V)	Frequency (MHz)	Reading (dB\mu V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Duty Cycle Factor (dB)	Adjusted Reading (dB\mu V/m)	47 CFR 15.231(b)						
Hpk	433.9	73.7	0.0	17.3	3.6	0.0	94.6	100.8	-6.2	Pass				
Hav	433.9	73.7	0.0	17.3	3.6	14.0	80.6	80.8	-0.2	Pass				
Table Result: Pass by -0.2 dB								Worst Freq: 433.9 MHz						
Test Site: "M"		Pre-Amp: none		Cable: EMIR-16		Analyzer: Blue		Antenna: Green						

Harmonics and Spurious Emissions

LIMIT

“...the field strength of emissions from intentional radiators operated under this Section shall not exceed the following:”

Fundamental Frequency	Field Strength of Fundamental (microvolts/meter)	Field Strength of Spurious Emissions (microvolts/meter)
260 - 470 MHz	3,750 to 12,500**	375 to 1,250**

** linear interpolations

[15.231(b)]

$$Limit = (20 \times \log(41.6667(Freq[MHz]) - 7083.3333\mu V)) - 20$$

$$Limit = (20 \times \log(41.6667(433.9) - 7083.3333\mu V)) - 20$$

$$Limit = (20 \times \log(10,995.84\mu V)) - 20 = 60.8\text{dB}\mu V/\text{m} @ 3\text{m}$$

MEASUREMENTS

Radiated Spurious and Harmonics Emissions Table

Curtis-Straus LLC

Date: 25-Jul-07		Company: Scully Signal Company		Work Order: H0790						
Engineer: Evan Gould		EUT Desc: SculCom 09601 and 09603								
Frequency Range: 30-1000MHz				Measurement Distance: 3 m						
Notes: No spurious emissions were found in this range; only harmonics were found. Worst case 100ms duty cycle: 20ms/100ms; 20*log(20/100) = -14dB										
Antenna Polarization (H / V)	Frequency (MHz)	Reading (dB\mu V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Duty Cycle Factor (dB)	Adjusted Reading (dB\mu V/m)	47 CFR 15.231(b)		
09601; Power setting = 1dB			—	—	—	—	—	Limit (dB\mu V/m)	Margin (dB)	Result (Pass/Fail)
Hpk	867.8	27.0	0.0	21.7	5.6	0.0	54.3	80.8	-26.5	Pass
Hav	867.8	27.0	0.0	21.7	5.6	14.0	40.3	60.8	-20.5	Pass
09603; Power setting = 0dB			—	—	—	—	—	—	—	—
Hpk	867.8	27.0	0.0	21.7	5.6	0.0	54.3	80.8	-26.5	Pass
Hav	867.8	27.0	0.0	21.7	5.6	14.0	40.3	60.8	-20.5	Pass
Table Result: Pass by -20.5 dB				Worst Freq: 867.8 MHz						
Test Site: "M"	Pre-Amp: none	Cable: EMIR-16	Analyzer: Blue	Antenna: Green						

Radiated Spurious and Harmonics Emissions Table

Curtis-Straus LLC

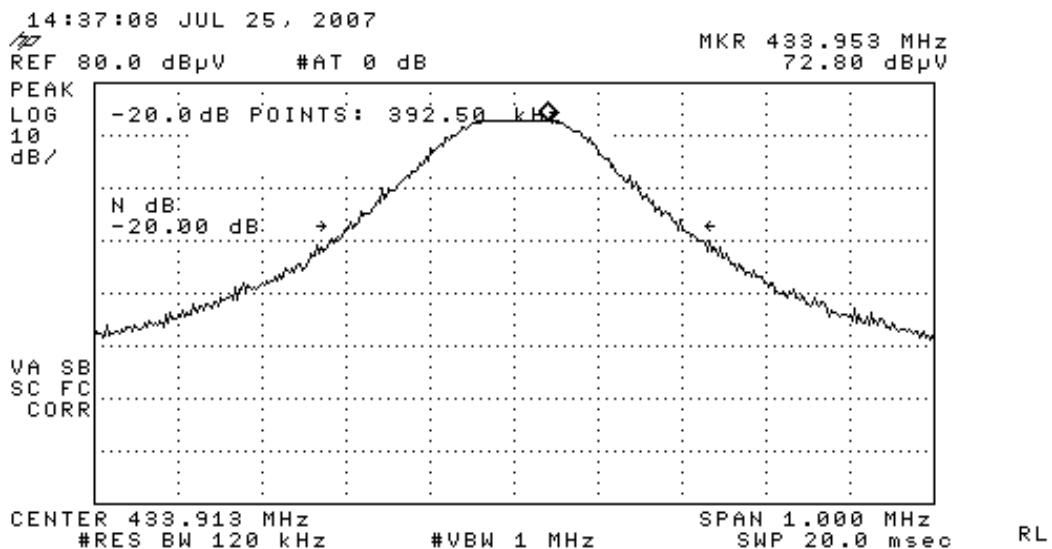
Date: 25-Jul-07		Company: Scully Signal Company		Work Order: H0790						
Engineer: Evan Gould		EUT Desc: SculCom 09601 and 09603								
Frequency Range: 1-5GHz				Measurement Distance: 3 m						
Notes: No spurious emissions were found in this range; only harmonics were found. Worst case 100ms duty cycle: 20ms/100ms; 20*log(20/100) = -14dB 1301.8MHz is in a restricted band as per 15.205, and must meet the limits of 15.209.										
Antenna Polarization (H / V)	Frequency (MHz)	Reading (dB\mu V)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Duty Cycle Factor (dB)	Adjusted Reading (dB\mu V/m)	47 CFR 14.231(b) OR 15.209		
09603; Power setting = 0dB			—	—	—	—	—	—	—	—
Vpk	1301.8	57.5	16.0	24.8	0.9	0.0	67.2	74.0	-6.8	Pass
Vav	1301.8	42.8	16.0	24.8	0.9	14.0	52.5	54.0	-1.5	Pass
09601; Power setting = 1dB			—	—	—	—	—	—	—	—
Vpk	1301.8	58.4	16.0	24.8	0.9	0.0	68.1	74.0	-5.9	Pass
Vav	1301.8	43.7	16.0	24.8	0.9	14.0	53.4	54.0	-0.6	Pass
Vpk	1735.7	50.7	17.0	25.8	1.0	0.0	60.5	80.8	-20.3	Pass
Vav	1735.7	35.0	17.0	25.8	1.0	14.0	44.8	60.8	-16.0	Pass
Vpk	2169.6	46.4	17.5	27.3	1.2	0.0	57.4	80.8	-23.4	Pass
Vav	2169.6	30.9	17.5	27.3	1.2	14.0	41.9	60.8	-18.9	Pass
Table Result: Pass by -0.6 dB				Worst Freq: 1301.8 MHz						
Test Site: "M"	Pre-Amp: White	Cable: EMIR-HIGH-21	Analyzer: E7405A	Antenna: Orange Horn						

Bandwidth**LIMIT**

"The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier." [15.231(c)]

$$\text{Limit} = 433.9 \text{ MHz} \times 0.25\%$$

$$\text{Limit} = 433.9 \text{ MHz} \times 0.0025 = 1.08 \text{ MHz}$$

MEASUREMENT**20dB Bandwidth**

Test Equipment Used

REV. 25-JUL-2007

SPECTRUM ANALYZERS / RECEIVERS		RANGE	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
RED	9kHz-1.8GHz	8591E	Agilent	3441A03559	00024	I		08-JAN-2008
WHITE	9kHz-22GHz	8593E	Agilent	3547U01252	00022	I		06-OCT-2007
BLUE	9kHz-1.8GHz	8591E	Agilent	3223A00227	00070	I		18-DEC-2007
YELLOW	9kHz-2.9GHz	8594E	Agilent	3523A01958	00100	I		08-JUN-2008
GREEN	9kHz-26.5GHz	8593E	Agilent	3829A03618	00143	I		Out of Cal
BLACK	9kHz-12.8GHz	8596E	Agilent	3710A00944	00337	I		Out of Cal
TELECOM 3585A	20Hz-40.0MHz	3585A	Agilent	2504A05219	00030	I		15-FEB-2008
TELECOM 3585A	20Hz-40.0MHz	3585A	Agilent	1750A03418	00558	I		Out of Service
TELECOM 3585A	20Hz-40.0MHz	3585A	Agilent	1750A02762	01067	I		Out of Service
ORANGE	9kHz-26.5GHz	E4407B	Agilent	US39440975	00394	I		Out of Service
BROWN (RENTAL)	9kHz-26.5GHz	E4407B	Agilent	SG44210511	Rental	I		01-FEB-2008
EMI TEST RECEIVER	20-1000MHz	ESVS30	R&S	827957/001	01098	I		To be determined
NEW 4407B	100Hz-26.5 GHz	E4407B	Agilent			I		Out for Cal
RENTAL E7405A	100Hz-26.5 GHz	E7405A	Agilent	MY44212795	Rental	I		28-DEC-2007
RENTAL 8591EM		8591EM	Agilent		Rental	I		
RENTAL E7402A		E7402A	Agilent	MY45103221	Rental	I		23-JUL-2008
LISNs/MEASUREMENT PROBES		RANGE	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
RED	9kHz-50MHz	8012-50-R-24-BNC	SOLAR	956348	00753	I		06-JUN-2008
BLUE (DC)	50kHz-50MHz	8012-50-R-24-BNC	SOLAR	956349	00752	I		06-JUN-2008
YELLOW-BLACK	9kHz-50MHz	8012-50-R-24-BNC	SOLAR	0411657	00248	I		24-MAY-2008
ORANGE	9kHz-30MHz	8012-50-R-24-BNC	SOLAR	903707	00754	I		07-MAY-2008
GOLD (DC)	9kHz-50MHz	8012-50-R-24-BNC	SOLAR	984734	00247	I		13-JUN-2008
BROWN	50kHz-50MHz	8012-50-R-24-BNC	SOLAR	0411656	00986	I		12-JUN-2008
GREEN	9kHz-50MHz	8012-50-R-24-BNC	SOLAR	984735	00987	I		12-JUN-2008
YELLOW	9kHz-50MHz	8012-50-R-24-BNC	SOLAR	0411658	1080	I		06-JUN-2008
WHITE-BLACK	10kHz-30MHz	8610-50-TS-100-N	SOLAR	972019	00678	I		17-MAY-2008
BLACK	10kHz-30MHz	8610-50-TS-100-N	SOLAR	972017	00675	I		18-MAY-2008
RED-BLACK	10kHz-30MHz	8610-50-TS-100-N	SOLAR	972016	00677	I		18-MAY-2008
BLUE-BLACK	10kHz-30MHz	8610-50-TS-100-N	SOLAR	972018	00676	I		17-MAY-2008
BLUE MONITORING PROBE	0.01-150MHz	91550-2	TEGAM	12350	00807	I		31-MAY-2009
YELLOW MONITORING PROBE	0.01-150MHz	91550-2	ETS	50972	00493	I		23-JAN-2008
GREEN CURRENT TRANSFORMER	40Hz-20MHz	150	PEARSON	10226	00793	I		19-APR-2009
BLUE CISPR LINE PROBE	10kHz-50MHz	N/A	C-S	N/A	00805	II		08-JUN-2009
BLACK CISPR LINE PROBE	10kHz-50MHz	N/A	C-S	N/A	1254	II		08-JUN-2009
CISPR TELCO VOLTAGE PROBE	10kHz-30MHz	CS A/C-10	C-S	CS01	00296	II		17-NOV-2007
CISPR 22 TELCO ISN	9kHz-30MHz	FCC-TLISN-T4	FISCHER	20115	00746	I		15-NOV-2007
OPEN AREA TEST SITES (OATS)		FCC CODE	IC CODE	VCCI CODE	CAT		CALIBRATION DUE	
SITE F		93448	IC 2762A-1	R-1688	II		23-JUN-2008	
SITE T		93448	IC 2762A-2	R-905	II		23-JUN-2008	
SITE A		93448	IC 2762-A	R-903	II		20-JUN-2008	
SITE M		93448	IC 2762-M	R-904	II		19-JUN-2008	
SITE J		93448	IC 2762A-3	R-2377	II		12-APR-2008	
CONDUCTED TEST SITES (MAINS / TELCO)		FCC CODE	IC CODE	VCCI CODE	CAT		CALIBRATION DUE	
EMI 1		93448	N/A	C-1801, T-268	III		NA	
EMI 2		93448	N/A	C-1802, T-269	III		NA	
EMI 3		93448	N/A	C-1803, T-270	III		NA	
MIXERS/DIPLEXERS		RANGE	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
MIXER / HORN	26.5-40 GHz	11970A/28-442-6	HP/ATM	2332A01695/A046903-01	1087	I		23-AUG-2007
MIXER / HORN	26.5-40 GHz	11970A/28-442-6	HP/ATM	3003A07825/A046903-01	1086	I		19-SEP-2007
MIXER / HORN	40-60 GHz	M19HW/A	OML	U30110-1	00821	I		29-JUN-2009
MIXER	33-50 GHz	11970Q	HP	3003A03155	00104	I		08-NOV-2007
MIXER / HORN	50-75 GHz	11970V/QWH-VPRRO	HP/QUINSTAR	2521A01197/8794001	1179	I		15-NOV-2007
MIXER	75-110 GHz	11970W	HP	2521A01334	00105	I		22-NOV-2007
MIXER / HORN	60-90 GHz	M12HW/A	OML	E30110-1	00822	I		29-JUN-2009
MIXER / HORN	90-140 GHz	MO8HW/A	OML	F21206-1	00811	I		29-JUN-2009
MIXER / HORN	140-220 GHz	MO5HW/A	OML	G21206-1	00812	I		29-JUN-2009
DIPLEXER	40-220 GHz	DPL.26	OML	N/A	00813	I		29-JUN-2009



ABSORBING CLAMPS	RANGE	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
FISCHER CLAMP	30-1000MHz	F-201-23MM	FISCHER	10	00081	I	20-JAN-2008
HARMONIC & FLICKER ANALYZER	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE	
HFTS 1000I/2 AC POWER SYSTEM	HP6842A (2) 500I	HP CALIFORNIA INSTRUMENTS	3531A-00169 HK53687/HK53688	00738 00376	II II	OUT OF CAL 09-JAN-2008	
PREAMPS / ATTENUATORS / FILTERS	RANGE	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
RED	0.009-2000MHz	ZFL-1000-LN	C-S	N/A	00798	II	20-APR-2008
BLUE	0.009-2000MHz	ZFL-1000-LN	C-S	N/A	00759	II	17-APR-2008
BLUE-BLACK	0.009-2000MHz	ZFL-1000-LN	C-S	N/A	00800	II	18-JAN-2008
GREEN	0.009-2000MHz	ZFL-1000-LN	C-S	N/A	00802	II	02-MAY-2008
BLACK	0.009-2000MHz	ZFL-1000-LN	C-S	N/A	00799	II	19-JUL-2008
ORANGE	0.009-2000MHz	ZFL-1000-LN	C-S	N/A	00765	II	02-MAY-2008
RED-WHITE	0.009-2000MHz	ZFL-1000-LN	C-S	N/A	1258	II	08-MAY-2008
WHITE	1-20GHz	SMC-12A	C-S	426643	00760	II	09-JUL-2008
BROWN	1-20GHz	PM2-38-218-4R5-17-15-SFF	C-S	PL1655	1132	II	02-APR-2008
YELLOW-BLACK	1-20GHz	SMC-12A	C-S	535055	00801	II	OUT OF SERVICE
RED-GREEN	1-20GHz	PM2-38-218-4R5-17-15-SFF	C-S	N/A	1256	II	14-AUG-2007
RED-BLUE	1-20GHz	PE2-38-218-4R5-17-15-SFF	C-S	PL3177	1257	II	19-APR-2008
HF (YELLOW)	18-26.5GHz	AFS4-18002650-60-8P-4	C-S	467559	1266	I	23-AUG-2007
HIGH PASS FILTER	1-18 GHz	SPA-F-55204	K&L	36	00817	II	05-JAN-2008
LOW PASS FILTER	1-9 GHz	11SL10-4100/X4400-O/O	K&L	4	00816	II	05-JAN-2008
HIGH PASS FILTER	2.3-5.5 GHz	VHP-19	MINI-CIRCUITS	NA	1287	II	05-JAN-2008
HIGH PASS FILTER	1.9-2.7 GHz	VHP-16	MINI-CIRCUITS	NA	1288	II	05-JAN-2008
HF 20dB 50W ATTENUATOR	0.03-20 GHz	PE 7019-20	PASTERNAK	01	00791	II	08-MAY-2009
HF 30dB 50W ATTENUATOR	0.03-20 GHz	PE 7019-30	PASTERNAK	02	1168	II	08-MAY-2009
40dB 100W ATTENUATOR	0.09-4000MHz	BW-40N100W+	MINI-CIRCUITS	V N014900638	1231	II	08-NOV-2007
RFI-Low 130 kHz LPF	10-100kHz PASS	130 kHz LPF	KIWA	NA	1235	II	12-MAR-2008
ANTENNAS	RANGE	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
GREEN BILOG	30-2000MHz	CBL6112B	CHASE	2742	00620	II	13-JAN-2008
GREEN-BLACK BILOG	30-2000MHz	CBL6112B	CHASE	2412	00127	II	13-JAN-2008
GREEN-RED BILOG	30-2000MHz	CBL6112B	CHASE	2435	00990	I	12-APR-2008
BLUE BILOG	30-1000MHz	3143	EMCO	1271	00803	II	06-MAY-2009
GRAY BILOG	20-2000MHz	3141	EMCO	9703-1038	00066	II	07-MAY-2009(EMI) / 04-FEB-2008(RFI2)
YELLOW-BLACK BILOG	20-2000MHz	CBL6140A	CHASE	1112	00126	II	07-MAY-2009(EMI) / 20-APR-2008(RFI)
RED-WHITE BILOG	30-2000MHz	JB1	SUNOL	A091604-1	01105	I	07-NOV-2008
RED-BLACK BILOG	30-2000MHz	JB1	SUNOL	A091604-2	01106	I	20-OCT-2008
RED-BROWN BILOG	30-2000MHz	JB1	SUNOL	A0032406	1218	I	04-AUG-2008
YELLOW HORN	1-18GHz	3115	EMCO	9608-4898	00037	I	31-MAY-2009(EMI) / 14-JUN-2008 (RFI)
BLACK HORN	1-18GHz	3115	EMCO	9703-5148	00056	I	22-JUN-2009(EMI) / 16-MAY-2008 (RFI)
ORANGE HORN	1-18GHz	3115	EMCO	0004-6123	00390	I	12-JUN-2009 (EMI) / 16-MAY-2008 (RFI)
HF (WHITE) HORN	18-26.5GHz	801-WLM	WAVELINE	00758	00758	I	26-AUG-2007
SMALL LOOP	10kHz-30MHz	PLA-130/A	ARA	1024	00755	I	22-FEB-2008
LARGE LOOP	20Hz-5MHz	6511	EMCO	9704-1154	00067	I	23-JAN-2008
ACTIVE MONPOLE	30Hz-30MHz	3301B	EMCO	3824	00068	II	14-JUN-2008
INDUCTION COIL	50-60Hz	1000-4-8	C-S	N/A	00778	II	26-SEP-2007
ADJUSTABLE DIPOLE	30-1000MHz	3121C	EMCO	1370	00757	I	26-OCT-2008
ADJUSTABLE DIPOLE	30-1000MHz	3121C	EMCO	1371	00756	I	09-NOV-2008
RE101 LOOP SENSOR	30Hz-100kHz	RE101-13.3CM	C-S	N/A	00818	II	22-MAR-2009
RS101 RADIATING LOOP	30Hz-100kHz	RS101-12CM	C-S	N/A	00819	II	22-MAR-2009
RS101 LOOP SENSOR	30Hz-100kHz	RS101-4CM	C-S	N/A	00820	II	22-MAR-2009
EFT	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE	
CAS 3025 BURST VERIFICATION ATTENUATORS	INA 265A/266	SCHAFFNER	20096	00947	II	28-JUN-2008	
EFT DIRECT COUPLING CAP	N/A	C-S	01	00794	II	19-JUL-2008	
MODULA6150	MODULA6150	TESEQ	34525	1268	I	11-JUL-2008	
RED BESTEMC-2	711-1100	SCHAFFNER	200122-074SC	00623	II	13-APR-2008	
EMC PRO PLUS	EMCPRO PLUS	KEYTEK	0608208	RENTAL	II	17-MAY-2008	
ESD GENERATORS	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE	
GREEN	NSG435	SCHAFFNER	000839	00763	I	25-OCT-2007	
RED	NSG435	SCHAFFNER	001625	00762	I	06-FEB-2008	

YELLOW	930D	ETS	201	00673	I	18-AUG-2007	
DIPS AND INTERRUPTS	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE	
MODULA6150 INA 6502 AUTOMATIC STEPTRANSFORMER 10001I/2 AC POWER SYSTEM RED BESTEMC-2	MODULA6150 INA 6502 (2) 500I 711-1100	TESEQ TESEQ CALIFORNIA INSTRUMENTS SCHAFFNER	34525 105 HK53687/HK53688 200122-074SC	1268 1269 00376 00623	I I II II	11-JUL-2008 11-JUL-2008 21-JUN-2008 17-APR-2008	
CHAMBERS AND STRIPLINE	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE	
RFI 1 CHAMBER RFI 2 CHAMBER RFI 3 STRIPLINE ENVIRONMENTAL (SAFETY) ENVIRONMENTAL (SAFETY)	3 METER COMPACT 04' x 07' SHIELDING SYSTEM N/A ECL5 SGTH-31S	PANASHIELD LINDGREN C-S B-M-A INC. B-M-A INC.	N/A 13329 N/A 2041 2245	00797 00795 00796 00029 00321	II II III I I	20-APR-2008 04-FEB-2008 NA 03-JAN-2008 03-JAN-2008	
AMPLIFIERS	RANGE	MN	MFR	SN	ASSET	CALIBRATION DUE	
RED GREEN BLUE BLACK ORANGE BROWN 150W GTC 1-2.6 HUGHES 10W HUGHES 10W HUGHES 10W HP495A AUDIO AMP AUDIO AMP	0.5-1000MHz 0.5-1000MHz 0.01-250MHz 0.01-250MHz 0.01-250MHz 0.1-250MHz 1.0-2.6 GHz 2.0-4.0 GHz 4.0-8.0 GHz 8-10.0 GHz 7.0-10.0 GHz AUDIO FREQ AUDIO FREQ	10W1000B 10W1000B 75A250 75A250 75A250 150A250 GRF5016A 1177H01 8010H02F 80108 HP495A MPA-200 MPA-200	AR AR AR AR AR AR GTC HUGHES HUGHES HUGHES HP RADIO SHACK RADIO SHACK	18708 23423 19165 23411 26827 313454 1221 055 240 138 304-00237 700438 708545	00032 00123 00039 00122 00367 1255 RENTAL RENTAL RENTAL RENTAL 00086 NONE 00862	II II II II II II II II II II II III III	28-JAN-2008 (RFI1) 04-FEB-2008 (RFI2) 03-NOV-2007 (EU CRFI) / 19-JUN-2008 (NEBS CRFI) 29-DEC-07 (EU CRFI) / 19-JUN-08 (NEBS) / 20-APR-08 (RFI1) 28-JUN-08 (NEBS CRFI) / 29-JUN-2008 (EU) 04-FEB-2008 (RFI2) 14-JUN-2008 (YELLOW & ORANGE HORN) / 28-JUN-2008 (BLK) 14-JUN-2008 (YELLOW HORN) / 16-MAY-2008 (BLK & ORANGE) 14-JUN-2008 (YELLOW HORN) / 16-MAY-2008 (BLK & ORANGE) 14-JUN-2008 (YELLOW HORN) / 17-MAY-2008 (BLK & ORANGE) OUT OF SERVICE (SPARE) NA NA
FIELD PROBES	RANGE	MN	MFR	SN	ASSET	CALIBRATION DUE	
RED GREEN BLUE Reference Laser Field Probe MICROWAVE SURVEY METER	0.01-1000MHz 0.01-1000MHz 0.01-1000MHz 0.1-6000MHz 2450MHz	HI-4422 HI-4422 HI-4422 FL7006 HI-1501	HOLADAY HOLADAY HOLADAY AR HOLADAY	90369 97363 95696 321700 00075464	00031 00136 01100 1252 1244	I I I I I	23-MAR-2008 25-JUL-2007 18-APR-2008 23-FEB-2008 09-JAN-2008
SIGNAL GENERATORS	RANGE	MN	MFR	SN	ASSET	CALIBRATION DUE	
RED BLUE GREEN ORANGE BROWN WHITE BROWN-WHITE BLUE-WHITE SWEEPER AM/FM STEREO SIG. GEN. IMPULSE GENERATOR	0.09-2000MHz 0.1-1000MHz 0.09-2000MHz 0.1-1000MHz 0.01Hz-15MHz 0.01Hz-15MHz 0.01Hz-15MHz 0.1Hz-13MHz 0.01-20.0GHz 0.1-170MHz 1-100Hz	HP8648B HP8648A HP8648B HP8648B HP33120A HP33120A HP33120A HP3312A HP83752A LG3236 CIG-25	Agilent Agilent Agilent Agilent Agilent Agilent Agilent Agilent Agilent LEADER ELECTRO-METRICS	3847U02192 3426A00548 3623A02072 3537A01210 US36016621 US36048143 SG40019842 1432A07632 3610A01133 3687301 290	00366 00034 00125 00025 1211 1219 1232 00775 00087 00959 00942	I I I I I I I I II I I	03-APR-2008 23-AUG-2007 16-OCT-2007 19-JUN-2008 OUT OF SERVICE 17-MAY-2008 10-NOV-2007 21-MAR-2008 08-MAY-2008 To be determined To be determined
BULK INJECTION CLAMPS	RANGE	MN	MFR	SN	ASSET	CALIBRATION DUE	
GREEN (NEBS CRFI) GREEN (EU CRFI) RED (NEBS CRFI) RED (EU CRFI) BLUE (RTCA/DO-160E) RENTAL (RTCA/DO-160E)	0.01-30MHz 0.15-80MHz 0.01-30MHz 0.15-80MHz 2-450MHz 2-450MHz	95236-1 95236-1 95236-1 95236-1 9142-1N 9142-1N	ETS ETS ETS ETS SOLAR SOLAR	50215 50215 34026 34026 063824 008508	00118 00118 1020 1020 1237 RENTAL	II II II II II II	19-JUN-2008(BLUE) 19-JUN-2008(BLK) 29-JUN-2008(ORANGE) 03-NOV-2007(BLUE) 29-DEC-2007(BLK) 28-JUN-2008(ORANGE) 19-JUN-2008(BLUE) 19-JUN-2008(BLK) 29-JUN-2008(ORANGE) 04-NOV-2007(BLUE) 02-JAN-2008(BLK) 28-JUN-2008(ORANGE) CALIBRATE BEFORE USE 10-AUG-2007
ANSI T1.315		MFR		ASSET	CAT	CALIBRATION DUE	
SBC NOISE CART SBC TRANSIENT CART		C-S C-S		1285 1286	III III	CALIBRATION NOT REQUIRED WAVESHAPE VERIFIED BEFORE USE	

OSCILLOSCOPES	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
EMC 100MHz	TDS 220	TEKTRONIX	C036986	1166	I	25-APR-2008
ESD REFERENCE 1GHz	TDS 684B	TEKTRONIX	B011287	RENTAL	I	03-APR-2008
400MHz E*SCOPE	TDS 3044B	TEKTRONIX	C010074	1275	I	19-JUL-2008
PRODUCT SAFETY 100 MHz	TDS 340	TEKTRONIX	B012357	00737	I	03-OCT-2007
TELECOM 100 MHz	54645A	HP/AGILENT	US36320452	00103	I	OUT OF SERVICE
REFERENCE 500MHz 10x PROBE	P6139A	TEKTRONIX	NA	1280	I	19-JUL-2008
REFERENCE 500MHz 10x PROBE	P6139A	TEKTRONIX	NA	1281	I	19-JUL-2008
500MHz 10x PROBE	P6139A	TEKTRONIX	NA	1282	I	19-JUL-2008
500MHz 10x PROBE	P6139A	TEKTRONIX	NA	1283	I	19-JUL-2008
REFERENCE HV 1000x PROBE	P6015A	TEKTRONIX	B056555	1277	I	20-JUL-2008
REFERENCE HV 1000x PROBE	P6015A	TEKTRONIX	B056590	1278	I	20-JUL-2008
CDN NETWORKS	RANGE	MN	MFR	ASSET	CAT	CALIBRATION DUE
BLUE	0.10-100MHz	20A M-3	C-S	00806	II	03-NOV-2007 (BLUE AMP) 29-DEC-2007 (BLK) 28-JUN-2008 (ORANGE)
RED	0.10-100MHz	15A M-3	C-S	00780	II	03-NOV-2007 (BLUE AMP) 29-DEC-2007 (BLK) 28-JUN-2008 (ORANGE)
YELLOW-BLACK	0.10-100MHz	15A M-3	C-S	00784	II	03-NOV-2007 (BLUE AMP) 29-DEC-2007 (BLK) 28-JUN-2008 (ORANGE)
GREEN	0.10-100MHz	30A M-3	C-S	00779	II	03-NOV-2007 (BLUE AMP) 04-AUG-2007 (BLK) 28-JUN-2008 (ORANGE)
YELLOW	0.10-100MHz	30A M-5	C-S	00804	II	03-NOV-2007 (BLUE AMP) 28-JUN-2008 (ORANGE)
BROWN	0.10-100MHz	M-3	C-S	1169	II	03-NOV-2007 (BLUE AMP) 29-DEC-2007 (BLK) 28-JUN-2008 (ORANGE)
BROWN-WHITE	0.10-100MHz	M-3	C-S	1170	II	03-NOV-2007 (BLUE AMP) 29-DEC-2007 (BLK) 28-JUN-2008 (ORANGE)
BROWN-BLACK	0.10-100MHz	M-2 (DC)	C-S	1171	II	03-NOV-2007 (BLUE AMP) 29-DEC-2007 (BLK) 28-JUN-2008 (ORANGE)
RED-BLACK	0.10-100MHz	M-2 (DC)	C-S	1177	II	03-NOV-2007 (BLUE AMP) 29-DEC-2007 (BLK) 28-JUN-2008 (ORANGE)
GREEN-WHITE	0.10-100MHz	M-2 (DC)	C-S	1259	II	03-NOV-2007 (BLUE AMP) 29-DEC-2007 (BLK) 28-JUN-2008 (ORANGE)
YELLOW (RES)	0.10-100MHz	100Ω RESISTOR	C-S	00810	II	04-NOV-2007 (BLUE AMP) 02-JAN-2008 (BLK) 28-JUN-2008 (ORANGE)
GREEN (RES)	0.10-100MHz	100Ω RESISTOR	C-S	1172	II	03-NOV-2007 (BLUE AMP) 02-JAN-2008 (BLK) 28-JUN-2008 (ORANGE)
ARTIFICIAL HAND	510Ω / 220PF	CS-AH	C-S	1262	II	04-JUN-2008
ARTIFICIAL HAND	510Ω / 220PF	CS-AH	C-S	1263	II	04-JUN-2008
RMS VOLTMETERS/CURRENT CLAMP	MN	MNFR	SN	ASSET	CAT	CALIBRATION DUE
TRUE-RMS MULTIMETER	79III	FLUKE	71700298	00769	I	27-OCT-2007
TRUE RMS MULTIMETER	179	FLUKE	89280616	1228	III	NOT CAL'D TO 17025
TRUE-RMS MULTIMETER (REFERENCE)	177	FLUKE	83390024	00973	I	22-MAR-2008
TRUE-RMS MULTIMETER	177	FLUKE	83390025	00974	I	22-MAR-2008
TRUE-RMS MULTIMETER (TELECOM)	177	FLUKE	83430419	00975	I	22-MAR-2008
AC/DC CURRENT PROBE	A622	TEKTRONIX	08DD 6275DV	1246	I	31-JAN-2008
SURGE GENERATORS	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
TRANSIENT WAVEFORM MONITOR	TWM-5	CDI	003982	00323	II	05-JUN-2008
UNIVERSAL SURGE GENERATOR	M5	CDI	003966	00324	II	CAL BEFORE USE
THREE PHASE COUPLING NWK	3CN	CDI	003455	00325	II	CAL BEFORE USE
1.2X50US PLUGIN MODULE	1.2x50US PLUGIN	CDI	N/A	00842	II	CAL BEFORE USE
10x160US PLUGIN MODULE	10x160US PLUGIN	C-S	N/A	00843	II	CAL BEFORE USE
10x560US PLUGIN MODULE	10x560US PLUGIN	C-S	N/A	00841	II	CAL BEFORE USE
PSURGE CONTROLLER MODULE	PSURGE 8000	HAEFELY	150267	00879	II	05-JUN-2008
COUPLING/DECOPUPLING MODULE	PCD 900	HAEFELY	149213	00880	II	05-JUN-2008
IMPULSE MODULE	PIM 900	HAEFELY	149202	00881	II	05-JUN-2008
HIGH VOLTAGE CAP NWK 5kVDC, 18μF	CS-HVCC	C-S	01	00772	II	09-APR-2008
NEBS SURGE GENERATOR	N/A	C-S	N/A	00088	II	18-OCT-2007
2x10US SURGE GENERATOR	2x10US	C-S	N/A	00846	II	CAL BEFORE USE
10x700US SURGE GENERATOR	10x700US	C-S	N/A	00847	II	06-JUN-2008
12 PAIR SURGE RESISTOR MODULE	N/A	C-S	N/A	00768	II	18-OCT-2007
VSS 500-M	TSS 500 M12 S2	EMTEST	V0502100032	1155	II	CAL BEFORE USE
TSS 500-M	TSS500 M10	EMTEST	V0502100031	1156	II	CAL BEFORE USE
NSG 2050 SURGE GENERATOR	NSG 2050	TESEQ	200720-605LU	1273	I	11-JUL-2008
PNW 2050 1.2x50 IMPULSE NETWORK	PNW 2050	TESEQ	200711-604LU	1279	I	11-JUL-2008
CDN 133 3 PHASE COUPLING NETWORK	CDN 133	TESEQ	34416	1274	I	11-JUL-2008
MODULA6150	MODULA6150	TESEQ	34525	1268	I	11-JUL-2008
RED BESTEMC-2	711-1100	SCHAFFNER	200122-074SC	00623	II	13-APR-2008
SURGE CURRENT MONITOR	CM-1-L	ION PHYSICS	896730	1276	II	26-JUL-2008
OVERVOLTAGE CHAMBERS	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
72kW POWER FAULT SIMULATOR	OV1	C-S	N/A	00792	III	N/A
POWER FAULT SIMULATOR	OV2	C-S	N/A	00116	III	N/A

POWER/NOISE METERS	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
POWER METER	435B	HP	2445A11012	00773	I	03-APR-2008
POWER METER	437B	HP	2912A01367	01099	I	03-APR-2008
POWER SENSOR	8481A	HP	2702A61351	00774	I	04-APR-2008
POWER METER	4232A	BOONTON	11000	1260	I	24-JUL-2008
POWER SENSOR	51013-4E	BOONTON	34457	1261	I	24-JUL-2008
PSOPHOMETER	2429	BRUEL & KJAER	1237642	00585	II	23-FEB-2009
TRANSMISSION LINE TESTER (DBRNC)	185T	AMREL	18507030010	1236	II	20-APR-2008
TRANSMISSION LINE TESTER (DBRNC)	185T	AMREL	998658	00823	II	03-JUL-2008
DIPOLE TAPE MEASURES	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
26FT TAPE #1	2338CME	LUFKIN	C3166-1	00776	II	22-MAR-2009
26FT TAPE #2	2338CME	LUFKIN	C3166-2	00777	II	22-MAR-2009
METEOROLOGICAL METERS	MN	MFR	SN	ASSET	CAT	CALIBRATION DUE
TEMP./HUMIDITY/ATM. PRESSURE GAUGE	7400 PERCEPTION II	DAVIS	N/A	00965	II	09-FEB-2009
TEMPERATURE /HUMIDITY GAUGE	THG-912	HUGER	4000562	00789	I	31-JAN-2009
WEATHER CLOCK (PRESSURE ONLY)	BA928	OREGON SCIENTIFIC	C3166-1	00831	I	08-FEB-2009
CONSUMABLES	SPEC.	MFR	STOCK/MN	ASSET	CAT	CALIBRATION DUE
NEBS CHEESECLOTH	26-28M/KG	ED&D	ACC-01	N/A	III	N/A
NEBS CARBON BLOCK	3-MIL-GAP 1KV SURGE	RELIABLE	3AB	N/A	III	N/A

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 were 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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