

Exhibit #1 FCC Experimental License Request, File # 0269-EX-PL-2002

Exhibit 1 for FCC Experimental License Request. File#: 0269-EX-PL-2002 Under FRN# 0007-9402-40

Test methods, frequencies and setups planned for the shielding evaluation of multiple structures at the St. Petersburg site were determined using IEEE STD 299-1997, IEEE Standard Method for Measuring the Effectiveness of Electromagnetic Shielding Enclosures, as a guide.

Test equipment used for tests may be replaced with suitable equivalent equipment due to availability.

Tx signal sources and antennas are listed below. Rx equipment consists of same model antenna connected to a HP 8562A (1k-22GHz) or equivalent spectrum analyzer.

Polarity key:
LHC = Left-hand circular
V = Vertical
H = Horizontal

		Line	Frequency list using IEEE STD 299-1997 as a guide.	Freq. Units	Modulation	Output waveform type	Tx and Rx Antenna #s	EIRP		EIRP		EIRP		Ant. Gain	Signal source, signal generator	Signal source power out (dBm)	Signal source power out		Polarity used in testing
#	Antenna List							Peak, CW. Based on AF (1 meter) and source Pout.	Peak, CW = dB Watts + dB Gain	conversion of EIRP dBW into milliwatts	1E-3 Watts	1E-3 Watts							
1	LG-105A, Loop	1	14	kHz	N/A	CW	1	0.750	A/m	-18.5	dBW	14.13	mW	1.5	HP 651A	10	10.00	milli watts	V/H
2	LP-105, Loop	2	80	kHz	N/A	CW	1,2	1.050	A/m	-18.5	dBW	14.13	mW	1.5	HP 651A	10	10.00	milli watts	V/H
3	VA105 Rod	3	520	kHz	N/A	CW	2	1.050	A/m	-18.5	dBW	14.13	mW	1.5	HP 651A	10	10.00	milli watts	V/H
4	EMCO 3104, Biconical	4	520	kHz	N/A	CW	3	0.0006	V/m	-14.0	dBW	39.81	mW	1	HP 651A	15	31.62	milli watts	V/H
5	EMCO 3101, log spiral	5	1	MHz	N/A	CW	3	0.0006	V/m	-14.0	dBW	39.81	mW	1	HP3325A	15	31.62	milli watts	V/H
6	EMCO 3146, log periodic	6	5.1	MHz	N/A	CW	3	0.0006	V/m	-14.0	dBW	39.81	mW	1	HP3325A	15	31.62	milli watts	V/H
7	EMCO 3115, Horn 1-18	7	10.1	MHz	N/A	CW	3	0.0006	V/m	-14.0	dBW	39.81	mW	1	HP83640A	15	31.62	milli watts	V/H
8	EMCO 3102, log spiral 1-10	8	52	MHz	N/A	CW	4	0.019	V/m	-13.0	dBW	50.12	mW	2	HP83640A	15	31.62	milli watts	V/H
9	EMCO 3105, double ridged horn 1-12 GHz	9	100	MHz	N/A	CW	4	0.072	V/m	-13.0	dBW	50.12	mW	2	HP83640A	15	31.62	milli watts	V/H
		10	523	MHz	N/A	CW	5	0.211	V/m	-11.0	dBW	79.43	mW	4	HP83640A	15	31.62	milli watts	V/H
		11	523	MHz	N/A	CW	6	1.420	V/m	-12.0	dBW	63.10	mW	3	HP83640A	15	31.62	milli watts	any/all
		12	1.29	GHz	N/A	CW	7	3.333	V/m	-1.0	dBW	1258.93	mW	11	HP8340A	20	100.00	milli watts	any/all
		13	1.29	GHz	N/A	CW	8	0.714	V/m	-7.0	dBW	199.53	mW	3	HP8340A	20	100.00	milli watts	any/all
		14	1.29	GHz	N/A	CW	9	1.667	V/m	-2.0	dBW	630.96	mW	8	HP8340A	20	100.00	milli watts	any/all
		15	4.19	GHz	N/A	CW	7,8,9	3.333	V/m	1.0	dBW	1258.93	mW	11	HP8340A	20	100.00	milli watts	any/all
		16	4.8	GHz	N/A	CW	7,8,9	3.333	V/m	1.0	dBW	1258.93	mW	11	HP8340A	20	100.00	milli watts	any/all
		17	5.47	GHz	N/A	CW	7,8,9	3.333	V/m	1.0	dBW	1258.93	mW	11	HP8340A	20	100.00	milli watts	any/all
		18	10.495	GHz	N/A	CW	7,8,9	3.333	V/m	1.0	dBW	1258.93	mW	11	HP8340A	20	100.00	milli watts	any/all
		19	18	GHz	N/A	CW	7	3.333	V/m	1.0	dBW	1258.93	mW	11	HP8340A	20	100.00	milli watts	any/all

Exhibit #1 FCC Experimental License Request, File # 0269-EX-PL-2002

Cell: J7

Comment: DRLA:
Value calculated using median AF for LG-105-A 36" Loop antenna.

Cell: P7

Comment: DRLA:
Estimated value based on loop antenna information, for similar antennas.

Cell: J8

Comment: DRLA:
Used worst case value - for the smaller loop antenna.

Cell: P8

Comment: DRLA:
Estimated value based on loop antenna information, for similar antennas.

Cell: J9

Comment: DRLA:
Used value - for the LP-105 12" loop antenna - AF = 55.

Cell: P9

Comment: DRLA:
Estimated value based on loop antenna information, for similar antennas.

Cell: J10

Comment: DRLA:
Empire VA-105 rod AF @ 1 MHz is 35. TAF calculated using AF is therefore is -67. V/m calculated using AF>TAF with source max power as antenna input. Equation reference is ETS-Lindgren catalog 2002, eq #24 on page 81, conversion between AF and TAF.

Cell: P10

Comment: DRLA:
Gain not available. Used value of "1.0" as a worst case, based on very high AF factor for this antenna at 1 meter, of 35.

Cell: J14

Comment: DRLA:
Entry calculated using value from vendor data for, input P required to get a 10 V/m field @ 1 meter distance. Table value was calculated using direct relation for Power in to field (V/m) at 1 meter.

Cell: P14

Comment: DRLA:
Value estimated from Vendor data.

Cell: J15

Comment: DRLA:
Entry calculated using value from vendor data for, input P required to get a 10 V/m field @ 1 meter distance. Table value was calculated using direct relation for Power in to field (V/m) at 1 meter.

Cell: P15

Comment: DRLA:
Value estimated from Vendor data.

Cell: J16

Comment: DRLA:
Entry calculated using value from vendor data for, input P required to get a 10 V/m field @ 1 meter distance. Table value was calculated using direct relation for Power in to field (V/m) at 1 meter.

Cell: P16

Comment: DRLA:
Value estimated from Vendor data.

Cell: J17

Comment: DRLA:
Value calculated using the antenna factor and the max source output (1.26 V).

Cell: P17

Comment: DRLA:
Value estimated from Vendor data.

Cell: J18

Exhibit #1 FCC Experimental License Request, File # 0269-EX-PL-2002

Comment: DRLA:

Entry calculated using value from vendor data for, input P required to get a 10 V/m field @ 1 meter distance. Table value was calculated using direct relation for Power in to field (V/m) at 1 meter.

Cell: P18

Comment: DRLA:

Value estimated from Vendor data.

Cell: J19

Comment: DRLA:

Entry calculated using value from vendor data for, input P required to get a 10 V/m field @ 1 meter distance. Table value was calculated using direct relation for Power in to field (V/m) at 1 meter.

Cell: P19

Comment: DRLA:

Value estimated from Vendor data.

Cell: J20

Comment: DRLA:

Entry calculated using value from vendor data for, input P required to get a 10 V/m field @ 1 meter distance. Table value was calculated using direct relation for Power in to field (V/m) at 1 meter.

Cell: P20

Comment: DRLA:

Value estimated from Vendor data.

Cell: J21

Comment: DRLA:

Used the maximum of all possible antennas for this entry.

Cell: L21

Comment: DRLA:

For multiple antennas, used max value for entry.

Cell: P21

Comment: DRLA:

For multiple antennas, used max value for entry.

Cell: P22

Comment: DRLA:

For multiple antennas, used max value for entry.

Cell: P23

Comment: DRLA:

For multiple antennas, used max value for entry.

Cell: P24

Comment: DRLA:

For multiple antennas, used max value for entry.

Cell: J25

Comment: DRLA:

Entry calculated using value from vendor data for, input P required to get a 10 V/m field @ 1 meter distance. Table value was calculated using direct relation for Power in to field (V/m) at 1 meter.

Cell: P25

Comment: DRLA:

Value estimated from Vendor data.