October 17, 2000

Federal Communications Commission
Equipment Approval Services
7435 Oakland Mills Road
Columbia, MD 21046

SUBJECT: **HANWHA CORPORATION**
FCC ID: OCCHWC-3000
731 Confirmation No.: EA98931

To Whom It May Concern:

On behalf of Hanwha Corporation is an amendment to submit revised Field Strength of Spurious Radiation test data for the above-referenced application as follows:

1. Previously submitted test data did not account for an additional 20dB attenuator.
2. The antenna factor and cable loss readings are corrected.

If you have any questions regarding the above, please do not hesitate to contact me.

Sincerely,

Shawn McMillen
General Manager
Celltech Research Inc.
Testing & Engineering Lab

cc: Hanwha Corporation

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3.6 FIELD STRENGTH OF SPURIOUS RADIATION – §2.1053

AMPS MODE

Operating Frequency:	824.04 MHz
Channel:	991 (Low)
Measured Conducted Power:	24.1 dBm
Modulation:	ST (Signaling Tone)
Distance:	3 meters
Limit:	$43 + 10 \log_{10}(W) = 40.31$ dBc

Frequency (MHz)	Level (dBm)	AFCL (dB)	POL (H/V)	ERP (dBm)	(dBc)
1648.08	$\leq$ - 70.7	30.55	H	- 28.03	50.27
2472.12	$\leq$ - 72.6	34.22	H	- 26.26	48.50
3296.16	$\leq$ - 75.1	37.15	H	- 25.83	48.07
4120.20	$\leq$ - 77.5	40.22	H	- 25.16	47.40
4944.24	< - 100				

Notes:
1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 10 MHz up to 20GHz.
3. < -100dBm is below the floor of the spectrum analyzer.
4. The EUT is manipulated through 3 orthogonal axis and the worst-case emission are reported.
5. The EUT is placed 3.0 meters away from the receiving antenna and the ERP is calculated using the formula.
   ERP (dBm) $= 10 \log_{10} (((r(mV/m)/1 \times 10^6)^2 / 49.2/1 \times 10^{-3})$
   ERP (dBm) $= 10 \log_{10} [(3 \times FS/1 \times 10^6)^2 / (49.2) \times 1000]$
   ERP (Watts) $= \{(3 \times FS)/1 \times 10^6\}^2 / 49.2$
   Note: The antenna factor and cable loss were determined prior to the test.

AMPS MODE

Operating Frequency: 836.49 MHz

Channel: 383 (Mid)

Measured Conducted Power: 25.0 dBm

Modulation: ST (Signaling Tone)

Distance: 3 meters

Limit: $43 + 10 \log_{10} (W) = 40.31$ dBc

Frequency (MHz)	Level (dBm)	AFCL (dB)	POL (H/V)	ERP (dBm)	(dBc)
1672.98	$\leq$ - 68.3	30.25	H	- 25.93	49.55
2509.97	$\leq$ - 74.9	34.01	H	- 28.77	52.39
3345.96	$\leq$ - 74.8	36.98	H	- 25.70	49.32
4182.45	$\leq$ - 73.9	39.89	H	- 21.89	45.51
5018.94	< - 100				

Notes:
1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 10 MHz up to 20GHz.
3. < -100dBm is below the floor of the spectrum analyzer.
4. The EUT is manipulated through 3 orthogonal axis and the worst-case emission are reported.
5. The EUT is placed 3.0 meters away from the receiving antenna and the ERP is calculated using the formula.
   ERP (dBm) $= 10 \log_{10} (((r(mV/m)/1 \times 10^6)^2 / 49.2/1 \times 10^{-3})$
   ERP (dBm) $= 10 \log_{10} [(3 \times FS/1 \times 10^6)^2 / (49.2) \times 1000]$
   ERP (Watts) $= \{(3 \times FS)/1 \times 10^6\}^2 / 49.2$
   Note: The antenna factor and cable loss were determined prior to the test.

AMPS MODE

Operating Frequency:	848.97 MHz
Channel:	799 (High)
Measured Conducted Power:	25.3 dBm
Modulation:	ST (Signaling Tone)
Distance:	3 meters
Limit:	$43 + 10 \log_{10} (W) = 40.31$ dBc

Frequency (MHz)	Level (dBm)	AFCL (dB)	POL (H/V)	ERP (dBm)	(dBc)
1697.94	$\leq$ - 66.9	30.12	H	- 24.66	48.22
2546.91	$\leq$ - 75.2	33.88	H	- 29.20	52.76
3395.88	$\leq$ - 77.2	36.75	H	- 28.33	51.89
4244.85	$\leq$ - 77.0	39.68	H	- 25.20	48.76
5093.82	< - 100				

Notes:
1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 10 MHz up to 20GHz.
3. < -100dBm is below the floor of the spectrum analyzer.
4. The EUT is manipulated through 3 orthogonal axis and the worst-case emission are reported.
5. The EUT is placed 3.0 meters away from the receiving antenna and the ERP is calculated using the formula.
   ERP (dBm) $= 10 \log_{10} (((r(mV/m)/1 \times 10^{6})^2 / 49.2/1 \times 10^{-3})$
   ERP (dBm) $= 10 \log_{10} [(3 \times FS/1 \times 10^{6})^2 / (49.2) \times 1000]$
   ERP (Watts) $= \{(3 \times FS)/1 \times 10^{6}\}^{2} / 49.2$
   Note: The antenna factor and cable loss were determined prior to the test.

CDMA MODE

Operating Frequency:	824.70 MHz
Channel:	1013 (Low)
Measured Conducted Power:	24.0 dBm
Modulation:	CDMA (Internal)
Distance:	3 meters
Limit:	$43 + 10 \log_{10}(W) = 37.48$ dBc

Frequency (MHz)	Level (dBm)	AFCL (dB)	POL (H/V)	ERP (dBm)	(dBc)
1649.40	$\leq$ - 69.5	30.55	H	- 26.83	48.13
2474.10	$\leq$ - 71.3	34.22	H	- 24.96	46.26
3298.80	$\leq$ - 74.0	37.15	H	- 24.73	46.03
4123.50	$\leq$ - 76.3	40.22	H	- 23.96	45.26
4948.20	< - 100				

Notes:

1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 10 MHz up to 20GHz.
3. < -100dBm is below the floor of the spectrum analyzer.
4. The EUT is manipulated through 3 orthogonal axis and the worst-case emission are reported.
5. The EUT is placed 3.0 meters away from the receiving antenna and the ERP is calculated using the formula.
   ERP (dBm) $= 10 \log_{10}(((r(mV/m)/1 \times 10^6)^2 / 49.2/1 \times 10^{-3})$
   ERP (dBm) $= 10 \log_{10}[(3 \times FS/1 \times 10^6)^2 / (49.2) \times 1000]$
   ERP (Watts) $= \{(3 \times FS)/1 \times 10^6\}^2 / 49.2$
   Note: The antenna factor and cable loss were determined prior to the test.

CDMA MODE

Operating Frequency:	835.89 MHz
Channel:	363 (Mid)
Measured Conducted Power:	24.0 dBm
Modulation:	CDMA (Internal)
Distance:	3 meters
Limit:	$43 + 10 \log_{10} (W) = 37.48$ dBc

Frequency (MHz)	Level (dBm)	AFCL (dB)	POL (H/V)	ERP (dBm)	(dBc)
1671.78	$\leq$ - 67.0	30.25	H	- 24.63	46.98
2507.67	$\leq$ - 75.5	34.01	H	- 27.37	49.72
3343.56	$\leq$ - 73.7	36.98	H	- 24.60	46.95
4179.45	$\leq$ - 72.5	39.89	H	- 20.49	42.84
5015.34	< - 100				

Notes:

1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 10 MHz up to 20GHz.
3. < -100dBm is below the floor of the spectrum analyzer.
4. The EUT is manipulated through 3 orthogonal axis and the worst-case emission are reported.
5. The EUT is placed 3.0 meters away from the receiving antenna and the ERP is calculated using the formula:
   ERP (dBm) $= 10 \log_{10} (((r(mV/m)/1 \times 10^6)^2 / 49.2/1 \times 10^{-3})$
   ERP (dBm) $= 10 \log_{10} [(3 \times FS/1 \times 10^6)^2 / (49.2) \times 1000]$
   ERP (Watts) $= \{(3 \times FS)/1 \times 10^6\}^2 / 49.2$
   Note: The antenna factor and cable loss were determined prior to the test.

CDMA MODE

Operating Frequency:	848.31 MHz
Channel:	777 (High)
Measured Conducted Power:	24.0 dBm
Modulation:	CDMA (Internal)
Distance:	3 meters
Limit:	$43 + 10 \log_{10} (W) = 37.48$ dBc

Frequency (MHz)	Level (dBm)	AFCL (dB)	POL (H/V)	ERP (dBm)	(dBc)
1696.62	$\leq$ - 65.6	30.12	H	- 23.36	45.16
2544.93	$\leq$ - 73.9	33.88	H	- 27.90	49.70
3393.24	$\leq$ - 75.8	36.75	H	- 26.93	48.73
4241.55	$\leq$ - 75.9	39.68	H	- 24.10	45.90
5089.86	< - 100				

Notes:

1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 10 MHz up to 20GHz.
3. < -100dBm is below the floor of the spectrum analyzer.
4. The EUT is manipulated through 3 orthogonal axis and the worst-case emission are reported.
5. The EUT is placed 3.0 meters away from the receiving antenna and the ERP is calculated using the formula:
   ERP (dBm) $= 10 \log_{10} (((r(mV/m)/1 \times 10^6)^2 / 49.2/1 \times 10^{-3})$
   ERP (dBm) $= 10 \log_{10} [(3 \times FS/1 \times 10^6)^2 / (49.2) \times 1000]$
   ERP (Watts) $= \{(3 \times FS)/1 \times 10^6\}^2 / 49.2$
   Note: The antenna factor and cable loss were determined prior to the test.