

Broadcast Engineering Services of Bonny Doon, Inc.

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RFR Measurements February 28, 2015 KPMW Hali`imaile, Hawai`i BPH-20140925AFY

Rey-Cel Broadcasting Inc, licensee of KPMW, has conducted RFR measurements to satisfy condition 3 of the above referenced construction permit.

Condition 3: Proper RFR measurements were made with the KPMW facilities operating at the newly authorized power of 21KW ERP.

A Narda NBM-550 RFR meter (Model NBM-550 Serial Number B-1049, with Probe Model EF0391, serial Number A-0917) was utilized for this set of measurements. The instrument was calibrated on 12/05/2013.

The maximum RFR level measured on the outside of the fence surrounding the tower was 0.0661 mW/cm² (66.1 microwatts per centimeter squared), or 33% of the public limit. The other areas surrounding the tower and fence were lower than this level.

These measurements showed that no areas outside the existing fence are above or even approach public limits, and that areas inside the existing fence do not exceed the public limits at any point. The fence is locked, and RFR Warning and Caution signage is already posted on the fence at the site

Respectfully submitted,



Donald E. Mussell Jr. NCE-CBT
Consulting Engineer
March 2, 2015

Instrument / Site

Meter	Probe
Model: NBM-550	Model: EF0391
S/N: B-1049	S/N: A-0917
Calibration Due Date 03/27/2016	Calibration Due Date 12/05/2015

Site	Coordinates
KPMW Kula, Hawaii	20-44-28.5 156-18-28.9 (NAD 83)

Comment
Maximum RFR on a line in front of KPMW directional array, adjacent to the fence surrounding the tower.

Measured Values

Spatial Avg:

Pos	Date/Time	E-Field
1	02/28/2015 01:19:18 PM	0.0661 mW/cm ²

Parameters

Number of Sub Indices	1
Storing Date	02/28/2015
Storing Time	01:19:18 PM
Dataset Type	SPA
Voice Comment Available	NO
Dataset Fine Type	S1
GPS Flag	NO
Device Product Name	NBM-550
Device Serial Number	B-1049
Device Cal Due Date	03/27/2016
Probe Product Name	EF0391
Probe Serial Number	A-0917
Probe Cal Due Date	12/05/2015
Probe Field Type	E
Probe Connection Type	A
Probe Lower Frequency Limit A	100 kHz
Probe Upper Frequency Limit A	3 GHz
Probe Lower Frequency Limit B	100 kHz
Probe Upper Frequency Limit B	3 GHz
Probe Emin A	185.0 mV/m

Probe Emax A	300.0 V/m
Probe Emin B	185.0 mV/m
Probe Emax B	300.0 V/m
Shaped Probe	NO
Standard ID	1
Standard Name	FCC 1997 Occupational
Apply Standard	ON
Frequency	300 kHz
Apply Correction Frequency	OFF
Eref_E(f)	614.0 V/m
Eref_H(f)	614.5 V/m
Combi Probe Use	E_H
Unit	mW/cm ²
Results Format	FIXED
Auto-Zero Interval	15 min
Result Type	-
Averaging Time	-
Average Progress	-
Spatial AVG Mode	CONTINUOUS

Instrument / Site

Meter		Probe	
Model:	NBM-550	Model:	EF0391
S/N:	B-1049	S/N:	A-0917
Calibration Due Date	03/27/2016	Calibration Due Date	12/05/2015

Site	Coordinates
KPMW Transmitter site, Kula, Hawaii	20-44-28.5 156-18-28.9 (NAD 83)

Comment
Measurements along upper fence line, 180 degrees from main lobe

Measured Values

Spatial Avg:

Pos	Date/Time	E-Field
1	02/28/2015 01:21:30 PM	0.0198 mW/cm ²

Parameters

Number of Sub Indices	1
Storing Date	02/28/2015
Storing Time	01:21:30 PM
Dataset Type	SPA
Voice Comment Available	NO
Dataset Fine Type	S1
GPS Flag	NO
Device Product Name	NBM-550
Device Serial Number	B-1049
Device Cal Due Date	03/27/2016
Probe Product Name	EF0391
Probe Serial Number	A-0917
Probe Cal Due Date	12/05/2015
Probe Field Type	E
Probe Connection Type	A
Probe Lower Frequency Limit A	100 kHz
Probe Upper Frequency Limit A	3 GHz
Probe Lower Frequency Limit B	100 kHz
Probe Upper Frequency Limit B	3 GHz
Probe Emin A	185.0 mV/m

Probe Emax A	300.0 V/m
Probe Emin B	185.0 mV/m
Probe Emax B	300.0 V/m
Shaped Probe	NO
Standard ID	1
Standard Name	FCC 1997 Occupational
Apply Standard	ON
Frequency	300 kHz
Apply Correction Frequency	OFF
Eref_E(f)	614.0 V/m
Eref_H(f)	614.5 V/m
Combi Probe Use	E_H
Unit	mW/cm ²
Results Format	FIXED
Auto-Zero Interval	15 min
Result Type	-
Averaging Time	-
Average Progress	-
Spatial AVG Mode	CONTINUOUS

Instrument / Site

Meter		Probe	
Model:	NBM-550	Model:	EF0391
S/N:	B-1049	S/N:	A-0917
Calibration Due Date	03/27/2016	Calibration Due Date	12/05/2015

Site	Coordinates
KPMW Transmitter Site, Kula, Hawaii	20-44-28.5 156-18-28.9 (NAD83)

Comment
Measured along the outside of the north fence line

Measured Values

Spatial Avg:

Pos	Date/Time	E-Field
1	02/28/2015 01:23:00 PM	0.0121 mW/cm ²

Parameters

Number of Sub Indices	1
Storing Date	02/28/2015
Storing Time	01:23:00 PM
Dataset Type	SPA
Voice Comment Available	NO
Dataset Fine Type	S1
GPS Flag	NO
Device Product Name	NBM-550
Device Serial Number	B-1049
Device Cal Due Date	03/27/2016
Probe Product Name	EF0391
Probe Serial Number	A-0917
Probe Cal Due Date	12/05/2015
Probe Field Type	E
Probe Connection Type	A
Probe Lower Frequency Limit A	100 kHz
Probe Upper Frequency Limit A	3 GHz
Probe Lower Frequency Limit B	100 kHz
Probe Upper Frequency Limit B	3 GHz

Probe Emin A	185.0 mV/m
Probe Emax A	300.0 V/m
Probe Emin B	185.0 mV/m
Probe Emax B	300.0 V/m
Shaped Probe	NO
Standard ID	1
Standard Name	FCC 1997 Occupational
Apply Standard	ON
Frequency	300 kHz
Apply Correction Frequency	OFF
Eref_E(f)	614.0 V/m
Eref_H(f)	614.5 V/m
Combi Probe Use	E_H
Unit	mW/cm ²
Results Format	FIXED
Auto-Zero Interval	15 min
Result Type	-
Averaging Time	-
Average Progress	-
Spatial AVG Mode	CONTINUOUS

Instrument / Site

Meter	Probe
Model: NBM-550	Model: EF0391
S/N: B-1049	S/N: A-0917
Calibration Due Date 03/27/2016	Calibration Due Date 12/05/2015

Site	Coordinates
KPMW Transmitter Site Kula, Hawaii	20-44-28.5 156-18-28.9 (NAD 83)

Comment
Measurements along a line east below the fence

Measured Values

Spatial Avg:

Pos	Date/Time	E-Field
1	02/28/2015 01:24:18 PM	0.0099 mW/cm ²

Parameters

Number of Sub Indices	1
Storing Date	02/28/2015
Storing Time	01:24:18 PM
Dataset Type	SPA
Voice Comment Available	NO
Dataset Fine Type	S1
GPS Flag	NO
Device Product Name	NBM-550
Device Serial Number	B-1049
Device Cal Due Date	03/27/2016
Probe Product Name	EF0391
Probe Serial Number	A-0917
Probe Cal Due Date	12/05/2015
Probe Field Type	E
Probe Connection Type	A
Probe Lower Frequency Limit A	100 kHz
Probe Upper Frequency Limit A	3 GHz
Probe Lower Frequency Limit B	100 kHz
Probe Upper Frequency Limit B	3 GHz
Probe Emin A	185.0 mV/m

Probe Emax A	300.0 V/m
Probe Emin B	185.0 mV/m
Probe Emax B	300.0 V/m
Shaped Probe	NO
Standard ID	1
Standard Name	FCC 1997 Occupational
Apply Standard	ON
Frequency	300 kHz
Apply Correction Frequency	OFF
Eref_E(f)	614.0 V/m
Eref_H(f)	614.5 V/m
Combi Probe Use	E_H
Unit	mW/cm ²
Results Format	FIXED
Auto-Zero Interval	15 min
Result Type	-
Averaging Time	-
Average Progress	-
Spatial AVG Mode	CONTINUOUS

