SECOND ADJACENT CHANNEL WAIVER REQUEST

The following engineering statement and attached exhibits have been prepared as a request for waiver of the spacing requirements of Section 73.807 with regard to second adjacent stations in the vicinity of the proposed facility. The technical data contained within this waiver request will demonstrate that the proposed LPFM facility would not cause interference to any facility on a second adjacent channel to which the spacing requirements of Section 73.807 are not fully met.

The proposed facility would be short-spaced to WKBU(FM) at New Orleans, Louisiana. The Facility ID of WKBU(FM) at New Orleans is 52434. This facility is located at a distance of 9.2 kilometers from the proposed LPFM site.

Exhibit W-1 depicts the proposed LPFM site along with the 101.5 dBu service contour for WKBU(FM). As this map demonstrates, this contour intersects the proposed LPFM site. Since the proposed LPFM facility would operate second adjacent to WKBU(FM), interference to that full-power facility would potentially occur in regions where the field strength of the LPFM facility is at least 40 dB above that of WKBU(FM). Specifically, interference may potentially occur where the LPFM field strength is at least 141.5 dBu.

The power density at the interfering field strength is determined by the following equation:

$$S = \frac{E^2}{Z_0}$$

In this equation, S represents the calculated power density in Watts per square meter, E is the electric field intensity, and Z_0 is the characteristic impedance of free space of 377 ohms.

The power density is also given by:

$$S = \frac{P}{4\pi R^2}$$

Where S is the same units, P is the power in Watts, and R is the distance from the antenna at which this field strength occurs.[1] Rearranging the terms in the equation, it can be solved for the distance to the desired power density as follows:

$$R^2 = \frac{P}{4\pi S}$$

The results of these calculations for depression angles of 0 degrees to 90 degrees are tabulated in Exhibit W-2, including the relevant variables from the above equations. The relative field values depicted in Exhibit W-2 are from the manufacturer data for the proposed antenna type, which is a single bay BKG77 model from Nicom.

The tabulation in Exhibit W-2 demonstrates that the maximum distance at any depression angle from the antenna to the field strength that would potentially cause interference to WKBU(FM) is 4 meters. The following satellite image illustrates a radius of 4 meters centered on the proposed supporting structure.

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[1] It should be noted that this distance is the distance from the antenna, which will not necessarily be equivalent to the distance from the supporting structure.

11.7.2013

As this image demonstrates, the maximum radius would not intersect any structure except the equipment shelter at the base of the tower. However, the center of radiation is 37.2 meters AGL; therefore the interference region would be no less than approximately 33 meters, or 108 feet above ground. No portion of the interference region would impact any populated areas. A waiver of Section 73.807 of the Commission's Rules is therefore respectfully requested.

JEREMY RUCK & ASSOCIATES, INC.

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11.7.2013
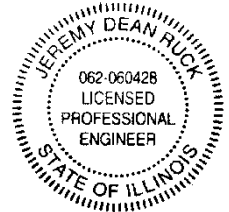
3

This waiver request and associated exhibits have been prepared by me at the request of the representative of the applicant. The waiver request text and related exhibits are true and accurate to the best of my belief and knowledge.

Above signature is digitized copy of actual signature
License Expires November 30, 2015

Jeremy D. Ruck, PE
November 7, 2013

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ACC361
Latitude: 29-59-25.60 N
Longitude: 090-04-26.60 W
ERP: 0.064 kW
Channel: 237
Frequency: 95.3 MHz
AMSL Height: 30.2 m
Horiz. Pattern: Omni

WKBU
BMLH20031124APE
Latitude: 29-55-11 N
Longitude: 090-01-29 W
ERP: 100.00 kW
Channel: 239
Frequency: 95.7 MHz
AMSL Height: 300.0 m
Horiz. Pattern: Omni

Proposed LPFM Site

WKBU 101.5 dBu
Service Contour

WKBU Transmitter Site

Orleans

10

610

30-00-00 N

Kenner

Metairie

ACC361

New Orleans

Arabi

Chalmette

29-58-00 N

90

Harahan

Meraux

Bridge City

29-56-00 N

Waggaman

Gretna

Avondale

Terrytown

WKBU

Westwego

Harvey

Violet

29-54-00 N

Jefferson

Marrero

090-12-00
090-10-00
090-08-00
090-06-00
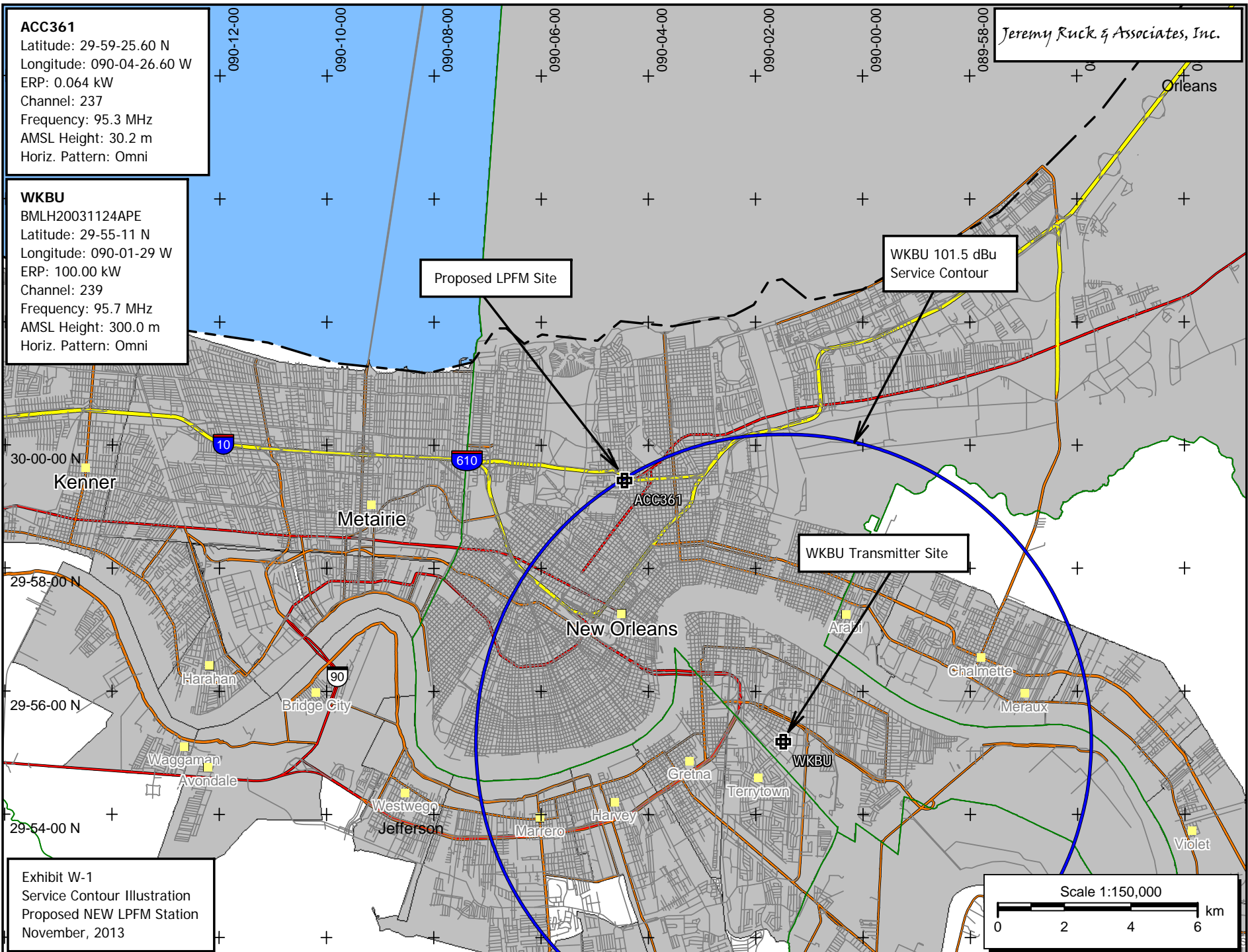090-04-00
090-02-00
090-00-00
089-58-00

Exhibit W-1
Service Contour Illustration
Proposed NEW LPFM Station
November, 2013

Scale 1:150,000

km
0   2   4   6

Exhibit W-2
Proximity Interference Analysis
NEW - Proposed LPFM Facility

Antenna No:	42	Center of Radiation:	37.2 m AGL
Manufacturer:	Nicom	Effective Radiated Power:	64 Watts
Model:	BKG-77	FS Contour:	141 dBu
Number of Bays:	1	E Field Strength:	11.22018 V/m
Bay Spacing:	Lambda	Z0 (Ohms):	377 Ohms
		Power Density:	0.33393247 W/m^2
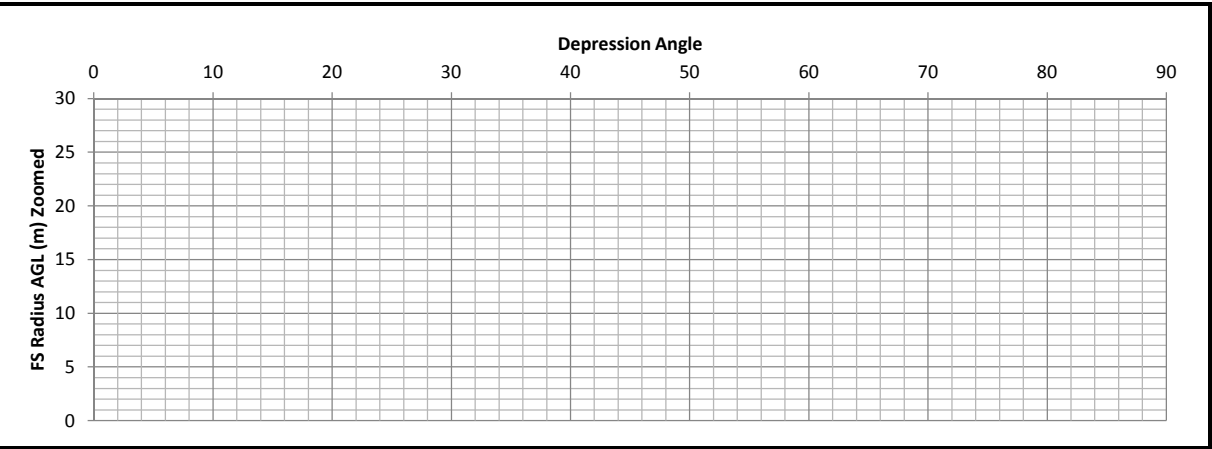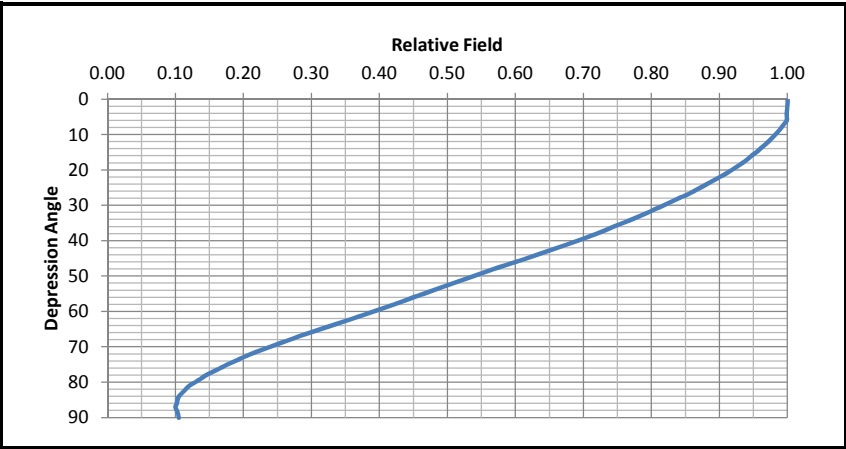
Relative Field (chart)

Depression Angle (chart)

Depression Angle	Relative Field	Relative Power	ERP Watts	Field Strength	Horizontal	Vertical	AGL
0	1.0000	1.0000	64.00	3.91	3.91	0.00	37.20
1	1.0000	1.0000	64.00	3.91	3.90	0.07	37.13
2	1.0000	1.0000	64.00	3.91	3.90	0.14	37.06
3	0.9990	0.9980	63.87	3.90	3.90	0.20	37.00
4	0.9990	0.9980	63.87	3.90	3.89	0.27	36.93
5	0.9990	0.9980	63.87	3.90	3.89	0.34	36.86
6	0.9990	0.9980	63.87	3.90	3.88	0.41	36.79
7	0.9950	0.9900	63.36	3.89	3.86	0.47	36.73
8	0.9910	0.9821	62.85	3.87	3.83	0.54	36.66
9	0.9870	0.9742	62.35	3.85	3.81	0.60	36.60
10	0.9820	0.9643	61.72	3.84	3.78	0.67	36.53
11	0.9770	0.9545	61.09	3.82	3.75	0.73	36.47
12	0.9720	0.9448	60.47	3.80	3.71	0.79	36.41
13	0.9660	0.9332	59.72	3.77	3.68	0.85	36.35
14	0.9600	0.9216	58.98	3.75	3.64	0.91	36.29
15	0.9540	0.9101	58.25	3.73	3.60	0.96	36.24
16	0.9470	0.8968	57.40	3.70	3.56	1.02	36.18
17	0.9410	0.8855	56.67	3.67	3.51	1.07	36.13
18	0.9340	0.8724	55.83	3.65	3.47	1.13	36.07
19	0.9260	0.8575	54.88	3.62	3.42	1.18	36.02
20	0.9180	0.8427	53.93	3.59	3.37	1.23	35.97
21	0.9100	0.8281	53.00	3.55	3.32	1.27	35.93
22	0.9000	0.8100	51.84	3.51	3.26	1.32	35.88
23	0.8910	0.7939	50.81	3.48	3.20	1.36	35.84
24	0.8810	0.7762	49.67	3.44	3.14	1.40	35.80
25	0.8720	0.7604	48.66	3.41	3.09	1.44	35.76
26	0.8620	0.7430	47.55	3.37	3.03	1.48	35.72
27	0.8520	0.7259	46.46	3.33	2.96	1.51	35.69
28	0.8400	0.7056	45.16	3.28	2.90	1.54	35.66
29	0.8290	0.6872	43.98	3.24	2.83	1.57	35.63
30	0.8180	0.6691	42.82	3.19	2.77	1.60	35.60
31	0.8060	0.6496	41.58	3.15	2.70	1.62	35.58
32	0.7950	0.6320	40.45	3.10	2.63	1.65	35.55
33	0.7830	0.6131	39.24	3.06	2.56	1.67	35.53
34	0.7710	0.5944	38.04	3.01	2.50	1.68	35.52
35	0.7580	0.5746	36.77	2.96	2.42	1.70	35.50
36	0.7450	0.5550	35.52	2.91	2.35	1.71	35.49
37	0.7320	0.5358	34.29	2.86	2.28	1.72	35.48
38	0.7190	0.5170	33.09	2.81	2.21	1.73	35.47
39	0.7060	0.4984	31.90	2.76	2.14	1.74	35.46
40	0.6910	0.4775	30.56	2.70	2.07	1.73	35.47
41	0.6760	0.4570	29.25	2.64	1.99	1.73	35.47
42	0.6610	0.4369	27.96	2.58	1.92	1.73	35.47
43	0.6460	0.4173	26.71	2.52	1.85	1.72	35.48
44	0.6310	0.3982	25.48	2.46	1.77	1.71	35.49
45	0.6160	0.3795	24.29	2.41	1.70	1.70	35.50

Depression Angle	Relative Field	Relative Power	ERP Watts	Field Strength	Horizontal	Vertical	AGL
45	0.6160	0.3795	24.29	2.41	1.70	1.70	35.50
46	0.6000	0.3600	23.04	2.34	1.63	1.69	35.51
47	0.5840	0.3411	21.83	2.28	1.56	1.67	35.53
48	0.5680	0.3226	20.65	2.22	1.48	1.65	35.55
49	0.5530	0.3058	19.57	2.16	1.42	1.63	35.57
50	0.5387	0.2902	18.57	2.10	1.35	1.61	35.59
51	0.5230	0.2735	17.51	2.04	1.29	1.59	35.61
52	0.5080	0.2581	16.52	1.98	1.22	1.56	35.64
53	0.4940	0.2440	15.62	1.93	1.16	1.54	35.66
54	0.4790	0.2294	14.68	1.87	1.10	1.51	35.69
55	0.4650	0.2162	13.84	1.82	1.04	1.49	35.71
56	0.4500	0.2025	12.96	1.76	0.98	1.46	35.74
57	0.4360	0.1901	12.17	1.70	0.93	1.43	35.77
58	0.4210	0.1772	11.34	1.64	0.87	1.39	35.81
59	0.4060	0.1648	10.55	1.59	0.82	1.36	35.84
60	0.3910	0.1529	9.78	1.53	0.76	1.32	35.88
61	0.3760	0.1414	9.05	1.47	0.71	1.28	35.92
62	0.3610	0.1303	8.34	1.41	0.66	1.24	35.96
63	0.3450	0.1190	7.62	1.35	0.61	1.20	36.00
64	0.3290	0.1082	6.93	1.28	0.56	1.15	36.05
65	0.3130	0.0980	6.27	1.22	0.52	1.11	36.09
66	0.2970	0.0882	5.65	1.16	0.47	1.06	36.14
67	0.2820	0.0795	5.09	1.10	0.43	1.01	36.19
68	0.2680	0.0718	4.60	1.05	0.39	0.97	36.23
69	0.2530	0.0640	4.10	0.99	0.35	0.92	36.28
70	0.2390	0.0571	3.66	0.93	0.32	0.88	36.32
71	0.2250	0.0506	3.24	0.88	0.29	0.83	36.37
72	0.2110	0.0445	2.85	0.82	0.25	0.78	36.42
73	0.1990	0.0396	2.53	0.78	0.23	0.74	36.46
74	0.1880	0.0353	2.26	0.73	0.20	0.71	36.49
75	0.1760	0.0310	1.98	0.69	0.18	0.66	36.54
76	0.1660	0.0276	1.76	0.65	0.16	0.63	36.57
77	0.1550	0.0240	1.54	0.61	0.14	0.59	36.61
78	0.1450	0.0210	1.35	0.57	0.12	0.55	36.65
79	0.1370	0.0188	1.20	0.54	0.10	0.53	36.67
80	0.1290	0.0166	1.07	0.50	0.09	0.50	36.70
81	0.1200	0.0144	0.92	0.47	0.07	0.46	36.74
82	0.1150	0.0132	0.85	0.45	0.06	0.44	36.76
83	0.1100	0.0121	0.77	0.43	0.05	0.43	36.77
84	0.1050	0.0110	0.71	0.41	0.04	0.41	36.79
85	0.1030	0.0106	0.68	0.40	0.04	0.40	36.80
86	0.1020	0.0104	0.67	0.40	0.03	0.40	36.80
87	0.1000	0.0100	0.64	0.39	0.02	0.39	36.81
88	0.1020	0.0104	0.67	0.40	0.01	0.40	36.80
89	0.1040	0.0108	0.69	0.41	0.01	0.41	36.79
90	0.1050	0.0110	0.71	0.41	0.00	0.41	36.79

Charts: **Depression Angle** (FS Radius AGL (m)), **Field Strength Radius (meters)**, **Horizonal Radius (meters)**, **Depression Angle** (Vertical Radius (meters)), **ERP in Watts**, **Relative Power**