



Compliance Measurements
For
The Cromwell Group, Inc Of IL
W225CL
In Relation To
Construction Permit
BMPPT-20160129ASQ
Granted 2/13/2016

SUMMARY: The included measurements in this presentation indicate that the operation of W225CL, as outlined in the attached Construction Permit, as specifically required on Page 2, of the attached Construction Permit, meet all “Spurious Emissions Compliance Standards” of FCC 73.317 b/c/d.

Description Of Measuring Method:

- 1 All measurements were performed using an ANRITSU MS2721A, Spectrum Analyzer, SN 611174
- 2 All measurements were made with a sub-wavelength (6”) antenna to assure that there were no resonant frequency gain boosts or roll-offs that could distort the trace results.
- 3 All measurements were made at a distance of at least 300 ft from the Radiating Antenna /System.
- 4 The “”Reference Carrier Level”, for the W225CL Carrier, was established by removing modulation for 2 seconds and then re-establishing the modulation for the balance of the measurements.
- 5 “Peak Hold” was used to store the “Unmodulated Carrier Reference” and the “Modulation Products”
- 6 All Measurements were performed by Francis (Frank) Hertel, Newman-Kees RF Measurements and Engineering (*Orig FCC License P1-18-48087 and Present FCC License PG-18-4049*) and Mr Edward Thomas, Contract Engineer for the Licensee.
- 7 The following pages are:
 - a: Pages 1, 2, 3 of the referenced “FCC Construction Permit
 - b: “Spectrum Analyzer Input Terminated For Baseline Measurement”
(*To show Baseline Analyzer Noise*)
 - c: “All Local FM Translators and AM 1420 KHZ Turned Off”
(*Comparison: To show Spectrum with all Local Carriers “OFF”*)
 - d: Notated Sweep Presentation, with all Local Transmitters turned “ON”, with Mask Overlay to show compliance with FCC 73.317 b/c/d.

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United States of America
FEDERAL COMMUNICATIONS COMMISSION
FM BROADCAST TRANSLATOR/BOOSTER STATION
CONSTRUCTION PERMIT

Authorizing Official:

Official Mailing Address:

THE CROMWELL GROUP, INC. OF ILLINOIS
P.O. BOX 150846
NASHVILLE TN 38215

James D. Bradshaw
Deputy Chief
Audio Division
Media Bureau

Facility Id: 147373

Call Sign: W225CL

Permit File Number: BMPPT-20160129ASQ

Grant Date: February 23, 2016

The authority granted herein has no effect on the expiration date of the underlying construction permit.

This Permit Modifies Permit No.: BNPPT-20131018ABH

Commission rules which became effective on February 16, 1999, have a bearing on this construction permit. See Report & Order, Streamlining of Mass Media Applications, MM Docket No. 98-43, 13 FCC RCD 23056, Para. 77-90 (November 25, 1998); 63 Fed. Reg. 70039 (December 18, 1998). Pursuant to these rules, this construction permit will be subject to automatic forfeiture unless construction is complete and an application for license to cover is filed prior to expiration. See Section 73.3598.

Name of Permittee: THE CROMWELL GROUP, INC. OF ILLINOIS

Principal community to be served: KY-OWENSBORO

Primary Station: WVJS (AM) , Frequency 1420 kHz, OWENSBORO, KY

Via: Other

Frequency (MHz): 92.9

Channel: 225

Hours of Operation: Unlimited

Callsign: W225CL

Permit No.: BMPPT-20160129ASQ

Antenna Coordinates: North Latitude: 37 deg 46 min 30 sec

West Longitude: 87 deg 09 min 32 sec

Transmitter: Type Accepted. See Sections 73.1660, 74.1250 of the Commission's Rules

Antenna type: (directional or non-directional): Directional

Major lobe directions (degrees true): Not Applicable

	Horizontally Polarized Antenna:	Vertically Polarized Antenna:
Effective radiated power in the Horizontal Plane (kw):	0.25	0.25
Height of radiation center above ground (Meters):	103	103
Height of radiation center above mean sea level (Meters):	225	225

Antenna structure registration number: 1044742

Overall height of antenna structure above ground (including obstruction lighting if any) see the registration for this antenna structure.

Special operating conditions or restrictions:

- 1 Pursuant to Revitalization of the AM Radio Service, First Report and Order, 30 FCC Rcd 12145, 12153 para. 16 (2015), the permittee/licensee and any successor in interest (licensee) shall be subject to the following restrictions. From the grant of the construction permit and continuing until the facility has achieved four years of on-air operations rebroadcasting the primary AM station identified on this authorization, the licensee may NOT change such primary station being rebroadcast by this translator, nor may it rebroadcast another station when the primary station identified on this authorization is silent. Periods of station silence shall not count toward the fulfillment of this four-year requirement. During this same four-year period the licensee may not assign or transfer the construction permit/license to another party, unless it is to the licensee of the AM station identified on this authorization or unless such assignment or transfer provides for the continuing right of the primary station to rebroadcast on the translator. Minor modifications of this authorization are permitted, provided that the translator will continue to rebroadcast the AM station for which the modification was granted.
- 2 BEFORE PROGRAM TESTS COMMENCE, sufficient measurements shall be made to establish that the operation authorized in this construction permit is in compliance with the spurious emissions requirements of 47 C.F.R. Sections 73.317(b) through 73.317(d). All measurements must be made with all stations simultaneously utilizing the shared antenna. These measurements shall be submitted to the Commission along with the FCC Form 350-FM application for license.

Callsign: W225CL

Permit No.: BMPPT-20160129ASQ

Special operating conditions or restrictions:

- 3 The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

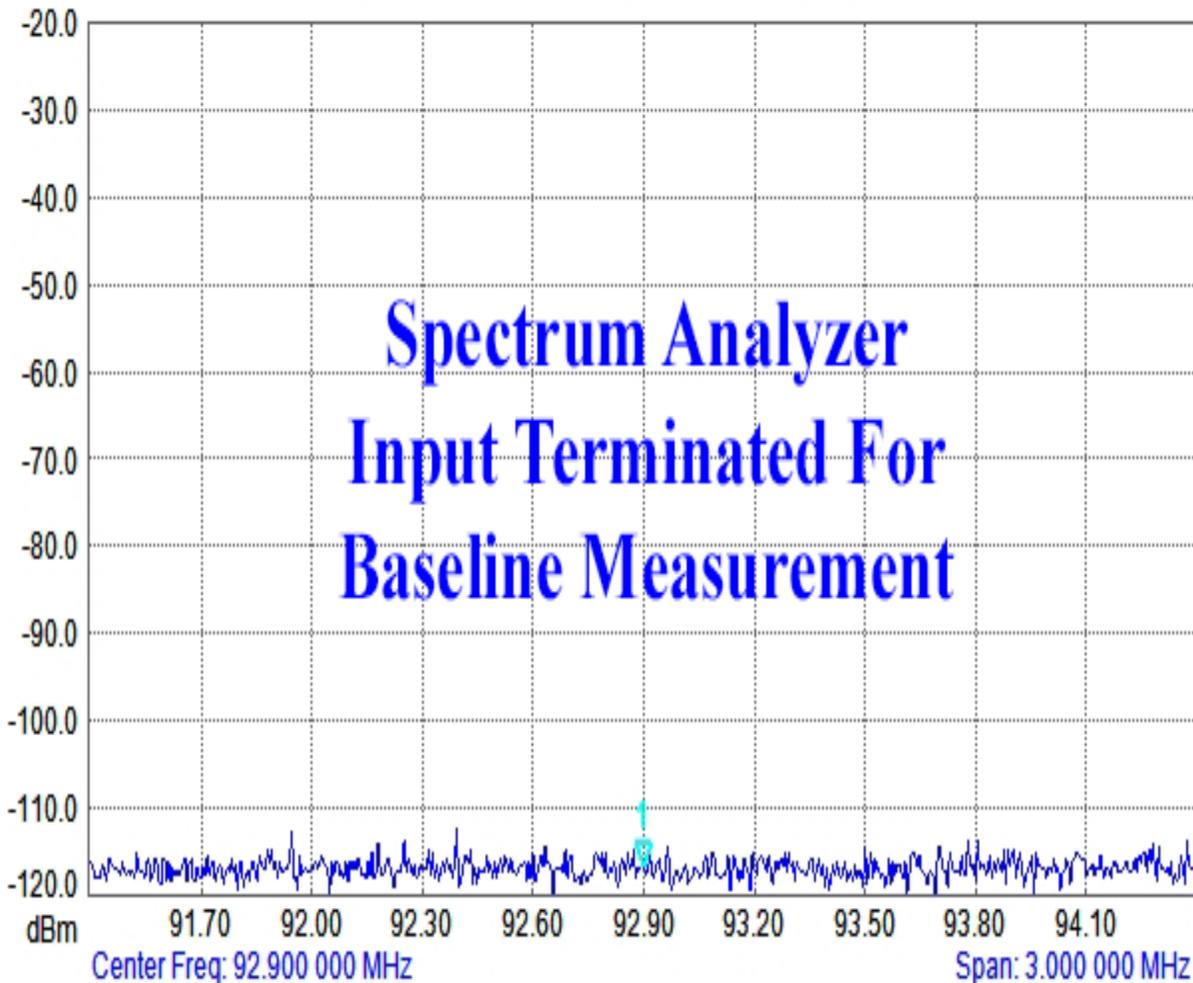
- 4 Prior to commencing program test operations, FM Translator or FM Booster permittee must have on file at the Commission, FCC Form 350, Application for an FM Translator or FM Booster Station License, pursuant to 47 C.F.R. Section 74.14.

- 5 W225CL, SPECIFIED IN BMPPT-20160129ASQ, CAN NOT FILE A LICENSE APPLICATION OR COMMENCE OPERATION UNTIL W263BG, BLPT-20051031ADC, FILES AN APPLICATION TO MODIFY ITS FACILITY OR CHANGE ITS PRIMARY STATION FROM WVJS (AM) .

*** END OF AUTHORIZATION ***

Spectrum Analyzer Data
w225cl_no_ant (3/16/2016 11:13:57 AM)

Spectrum Analyzer



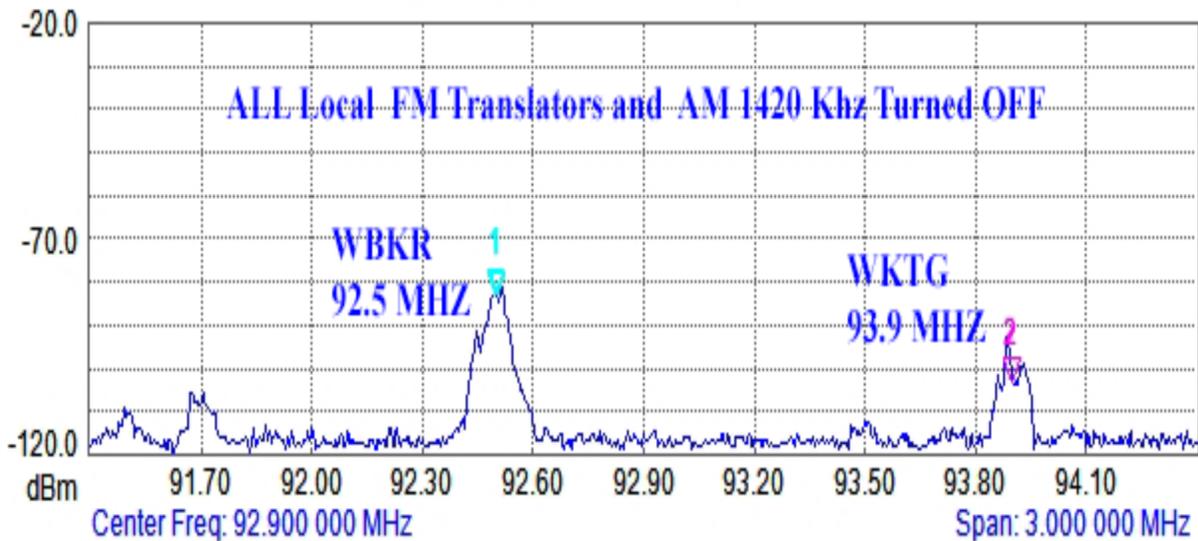
Measurement Parameters

Trace Mode	Normal	Stop Frequency	94.400 000 MHz
Trace Mode	Normal	Frequency Span	3.000 000 MHz
Preamp	OFF	Reference Level	-20.000 dBm
Min Sweep Time	0.5 S	Scale	10.0 dB/div
Reference Level Offset	0.0 dB	Operator Name	
Input Attenuation	0.0 dB	Tower	
RBW	100.0 Hz	Serial Number	611174
VBW	3.0 MHz	Base Ver.	V1.29
Detection	Peak	App Ver.	V1.28
Center Frequency	92.900 000 MHz	Date	3/16/2016 11:13:57 AM
Start Frequency	91.400 000 MHz	Device Name	NEWMAN-KEES--RF-MEASUREMENTS

Spectrum Analyzer Data

all_tx_off (3/16/2016 11:17:53 AM)

Spectrum Analyzer



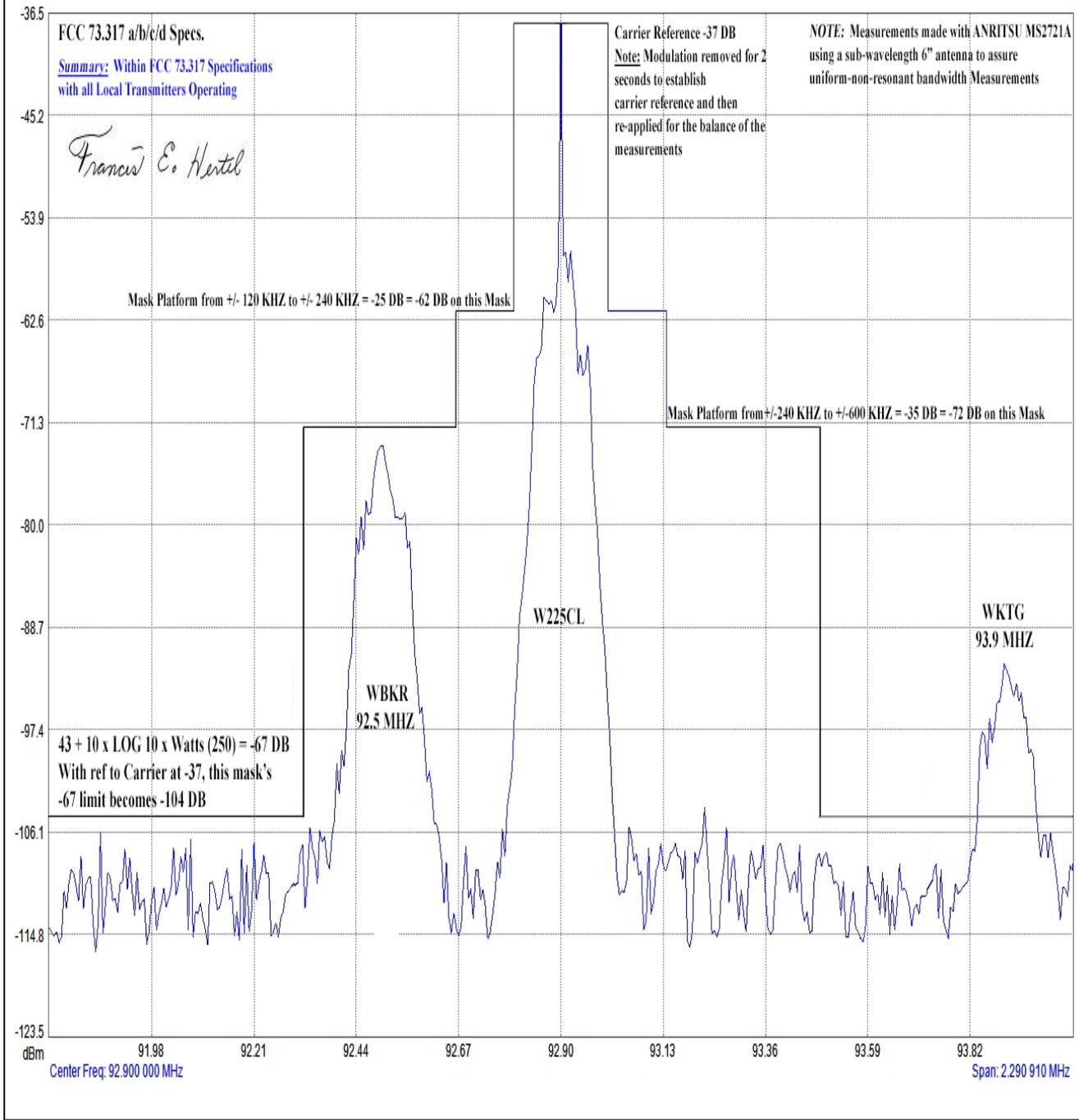
Mkr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	92.500 0 MHz	-82.76 dBm	--	--
2	<input type="checkbox"/>	<input type="checkbox"/>	93.900 0 MHz	-103.32 dBm	--	--
3	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--
5	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--
6	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--

Measurement Parameters

Trace Mode	Normal	Stop Frequency	94.400 000 MHz
Trace Mode	Normal	Frequency Span	3.000 000 MHz
Preamp	OFF	Reference Level	-20.000 dBm
Min Sweep Time	0.5 S	Scale	10.0 dB/div
Reference Level Offset	0.0 dB	Operator Name	
Input Attenuation	0.0 dB	Tower	
RBW	100.0 Hz	Serial Number	611174
VBW	3.0 MHz	Base Ver.	V1.29
Detection	Peak	App Ver.	V1.28
Center Frequency	92.900 000 MHz	Date	3/16/2016 11:17:53 AM
Start Frequency	91.400 000 MHz	Device Name	NEWMAN-KEES-RF-MEASUREMENTS

Spectrum Analyzer Data
w225cl (3/16/2016 11:02:20 AM)

Spectrum Analyzer



Measurement Parameters

Trace Mode	Max Hold	Stop Frequency	94.05 MHz
Trace Mode	Max Hold	Frequency Span	2.3 MHz
Preamp	OFF	Reference Level	-20.000 dBm
Min Sweep Time	0.5 S	Scale	8.7 dB/div
Reference Level Offset	0.0 dB	Operator Name	1-812-963-3294 Francis (Frank) Heretel P1-18-48087--PG-18-9094
Input Attenuation	0.0 dB	newman-kees-heretel-rf-eng@twc.com	W225CL Owensboro, KY
RBW	100.0 Hz	Serial Number	611174
VBW	3.0 MHz	Base Ver.	V1.29
Detection	Peak	App Ver.	V1.28
Center Frequency	92.900 000 MHz	Date	3/16/2016 11:02:20 AM
Start Frequency	91.75 MHz	Device Name	NEWMAN-KEES--RF-MEASUREMENTS