LAW OFFICES

MILLER AND NEELY, P.C.

SUITE 203

3750 UNIVERSITY BLVD. W. KENSINGTON, MD 20895

PHONE: (301) 933-6304 FAX: (301) 933-6306 MANDNLAW@GMAIL.COM

*ADMITTED PA AND DC ONLY

JERROLD D. MILLER

JOHN S. NEELY*

February 16, 2017

FEB 2 1 2017

Received & Inspected

Secretary
Federal Communications Commission
Washington, DC 20554

ATTN: Audio Division (AM)

RE: Form 302-AM

(Direct Measurement of Power & Update Monitor Point Description)

WKZO(AM) Kalamazoo, Michigan

FAC: 54485

Dear Madam Secretary:

Transmitted herewith in triplicate on behalf of Midwest Communications, Inc., licensee of the above-referenced station, is FCC Form 302-AM, an application for Direct Measurement of Power and to update monitor point descriptions.

No filing fee is required with this application. Any questions concerning this matter should be addressed to the undersigned.

John S. Neely

enes.

Received & Inspected

Federal Communications Commission Washington, D. C. 20554

FEB 2 1 2017 Approved by OMB 3060-0627 Expires 01/31/98

FCC 302-XM Mailroom

APPLICATION FOR AM BROADCAST STATION LICENSE

(Please read instructions before filling out form.

FOR FCC			
USE ONLY			

FILE NO. BZ-20170221 ACZ

SECTION I - APPLICANT FEE INFORMATION			
1. PAYOR NAME (Last, First, Middle Initial)			
Midwest Communications, Inc.	Copy notices a	and communica	ations to:
MAILING ADDRESS (Line 1) (Maximum 35 characters)	Miller and	l Neely, PC	
904 Grand Ave.	Suite 203		
MAILING ADDRESS (Line 2) (Maximum 35 characters)	3750 Unive Kensingtor	ersity Blvd., n, MD 20895	, West
CITY	STATE OR COUNTRY (if forei	gn address)	ZIP CODE
Wausau	WI		54403
TELEPHONE NUMBER (include area code)	CALL LETTERS WKZO FAC 54485	OTHER FCC IDENTIFY OF THE PRINT	TIFIER (If applicable) L7-37
2. A. Is a fee submitted with this application?			Yes KX No
B. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1	112).	-	
Governmental Entity Noncommercial educ	cational licensee XX Ot	her (Please explain):	
C. If Yes, provide the following information:	no	nfeeable dir	ect measurement
Enter in Column (A) the correct Fee Type Code for the service you are a	applying for. Fee Type Codes ma	v be found in the "M	ass Media Services Fee Filing
Guide." Column (B) lists the Fee Multiple applicable for this application	n. Enter fee amount due in Colun	nn (C).	
(A) (B)	(C)		
	FEE DUE FOR FEE TYP		
FEE TYPE CODE FEE MULTIPLE	CODE IN COLUMN (A)	FOR FCC USE ONLY
	\$		
	Ψ		
To be used only when you are requesting concurrent actions which resul	t in a requirement to list more tha	n one Fee Type Cod	e.
(A) (B)	(C)		
	\$		FOR FCC USE ONLY
	TOTAL AMOUNT		
ADD ALL AMOUNTS SHOWN IN COLUMN C,	TOTAL AMOUNT REMITTED WITH THIS	;	FOR FCC USE ONLY
AND ENTER THE TOTAL HERE.	APPLICATION		
THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.	\$		
NGTH 17 H YOU.		 	

SECTION II - APPLICANT	INFORMATION				
1. NAME OF APPLICANT		FRN OO	02-7117-37		
	ications, Inc.	PRN 00	02-/11/-3/		
MAILING ADDRESS 904 Grand Ave.					
CITY Wausau			STATE W	I	ZIP CODE 54403
2. This application is for:	XX Commercial		Noncomi	mercial	
	XX AM Direc AT NI		MA XX	Non-Directional YTIME	
Call letters	Community of License	Constructi	on Permit File No.	Modification of Construction	Expiration Date of Last
WKZO FAC 54485	Kalamazoo, MI	N,	/A	Permit File No(s).	Construction Permit
3. Is the station now op with 47 C.F.R. Section 73 If No, explain in an Exhib		matic pro	gram test autho	ority in accordance	XX Yes No Exhibit No.
4. Have all the terms construction permit been	s, conditions, and oblig fully met? Not			above described	Yes No Exhibit No.
If No, state exceptions in					
5. Apart from the chang grant of the underlying contained in the construction	construction which would tion permit application to	d result in	n any statement		Exhibit No.
If Yes, explain in an Exhi	bit. No	t Appl	icable		
6. Has the permittee file in accordance with 47 C.		FCC Form	ı 323) or owner	•	Yes No No Does not apply
If No, explain in an Exhib	it.				Exhibit No.
7. Has an adverse finding administrative body with criminal proceeding, broufelony; mass media relate governmental unit; or disc	respect to the applicant ught under the provisions ed antitrust or unfair com	or partie of any la	s to the applications to the	ation in a civil or ne following: any	Yes XX No
If the answer is Yes, attach including an identification and file numbers), and the been earlier disclosed in Section 1.65(c), the application by reference to station regarding which the of filing; and (ii) the disposal	n of the court or administ e disposition of the litigat connection with another licant need only provide to the file number in the content application or Section	trative bo ion. Wh applicat e: (i) ar ase of an 1.65 info	ody and the pro- nere the requisit ion or as requin- identification application, the ormation was fi	ceeding (by dates e information has red by 47 U.S.C. of that previous e call letters of the	Exhibit No.

8. Does the applicant, or any party to the application, have the expanded band (1605-1705 kHz) or a permit or licens expanded band that is held in combination (pursuant to the with the AM facility proposed to be modified herein? If Yes, provide particulars as an Exhibit.	a aliban in the contrit t	
The APPLICANT hereby waives any claim to the use of ar against the regulatory power of the United States because use authorization in accordance with this application. (See Section	in 304 of the Communicati	icense or otherwise, and requests and ions Act of 1934, as amended).
The APPLICANT acknowledges that all the statements made i representations and that all the exhibits are a material part application.		
CERTIFI	CATION	·
1. By checking Yes, the applicant certifies, that, in the case or she is not subject to a denial of federal benefits that included Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. a non-individual applicant (e.g., corporation, partnership association), no party to the application is subject to a discludes FCC benefits pursuant to that section. For the depurposes, see 47 C.F.R. Section 1.2002(b).	Ides FCC benefits pursuant Section 862, or, in the cas por other unincorpora	e of ated
2. I certify that the statements in this application are true, co and are made in good faith.	implete, and correct to the	e best of my knowledge and belief,
Taul Kahalau	Signature	
Title	Date 2/17/17	Telephone Number 715 872 1437
WILLFUL FALSE STATEMENTS ON THIS FORM ARE (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCA (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR	HUN OF ANY STATION	ND/OR IMPRISONMENT LICENSE OR CONSTRUCTION

CTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503)

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION III - LI		ICATION ENGIN	EERING DATA				
Midwest Co	ommunication	ons, Inc.					
PURPOSE OF A	UTHORIZATIO	N APPLIED FOR:	(check one)	All Marketine and American State of the Stat	richtigen für Versige jarden, seine eine der nach den der ein		THE REPORT OF THE PERSON OF TH
	Station License		✓ Direct Meas	surement of Pow	er		
1. Facilities author							
Call Sign		struction Permit	-	Hours of Opera	ition		kilowatts
WKZO	(if applicable)		(kHz) 590 kHz	UNLIMITED		Night 5.0 kW	Day 5.0 kW
2. Station location	<u>n</u>						J
State				City or Town			
Michigan				Kalamazo	00		
3. Transmitter lo	cation			1			
State	County			City or Town		Street address	
Michigan		oo County		Parchmen	t	(or other identific	•
4. Main studio lo				1 arommen		2210 McKinley S	>t.
State	County			City or Town		Street address	
	Kalamazo	o County		Kalamazoo		(or other identific	ation)
Michigan) 	4200 W. Main St.	
		(specify only if at	uthorized direction	T		Street address	
State	County	0 (City or Town		(or other identific	ation)
Michigan	Kalamazo	oo County		Kalamazo)	4200 W. Main St.	
7. Does the sam	pling system me	eet the requireme	nt been installed? nts of 47 C.F.R. S sampling system				ves No Not Applicable
8. Operating con				T			
RF common poin modulation for ni	ght system	rent (in amperes) .32 Amperes) without	RF common portion for	day system	current (in amperent)	es) without
Measured antenr operating frequer		oint resistance (ir	ohms) at	Measured ante operating frequency Night		n point reactance Day	(in ohms) at
Night 78.0 Oh	ms	12.8 O	hms	+j 0.6	Ohms		6.9 Ohms
Antenna indication	ons for direction:	al operation					
Towe		Antenna Phase reading	i	Antenna mo current	nitor sample ratio(s)	Antenna I	pase currents
		Night	Day	Night	Day	Night	Day
T1 (W)		0.0°		1.000		N/A N/A	
T2 (N)		-83.8°		0.750		N/A	
T3 (E)		77.0°		0.970		N/A	
Manufacturer and	d type of antenn	a monitor: Pot	omac Instrument	s AM-19 (204)			

SECTION III - Page 2

9 Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator T1-Guyed uniform, T2,T3,T4 tapered self supported. All Towers are steel mounted on base piers and insulators	All towers: 99.1 M	Overall height above ground on obstruction line N1: 99.7 m N4//D N2: 101.3 m N3: 100.3 m	(without htina)	Overall height in meters above ground (include obstruction lighting) N1: 100.6 m N4/D1: 101.2 m N2: 102.1 m N3: 101.2 m 087 ASR N4/D1: 1005086	If antenna is either top loaded or sectionalized, describe fully in an Exhibit. Exhibit No. DNA
Excitation	Series	Shunt	ASR N2: 1005 ASR N3: 1005	088	
tower location.	to nearest second. For direc	tional antenna g	ive coordinat	es of center of array. For sir	ngle vertical radiator give
North Latitude 42	° 20 ' 5	5 "	West Longitu	ode 85 ° 33	' 48 "
If not fully described about antenna mounted on tow	ove, attach as an Exhibit furt ver and associated isolation c	her details and dircuits.	dimensions i	ncluding any other	Exhibit No.
Also, if necessary for a dimensions of ground sy	a complete description, attac estem.	ch as an Exhib	it a sketch o	of the details and	Exhibit No.
	ny, does the apparatus const	ructed differ fron	n that descrit	ped in the application for con	struction permit or in the
permit? Form 302 & partia	al proof of performance have been	filed in response to	•	_	changes to a cellular
flower on AM array p	property. Noted changes on select MP				
11 Give reasons for the	e change in antenna or comm			enter a conservativa de la compansa	e en la merca de la companya de la c
	e in night common	white the experience process and an experience pro-	والميادي فرموا أريبين المحادوها فليد فالمياه فالمياه	a resistance	
; <u>.</u> \ <u>.</u> \.		personal and approved a contract of the contra			
	A COMPANY OF THE CONTRACT AND A CONTRACT OF THE COMPANY OF THE CONTRACT OF THE	Missilher Sylveni'n Amerikansing has bil ili e	egus er jerge ere men er i	and the second s	
	the applicant in the capacity true to the best of my knowle		v and that I	have examined the foregoin	g statement of technical
Name (Please Print or T		Si	gnature (che	ck appropriate box below)	
Richard P. Grzeb	ik		Duc	hard P	Ryelik
Address (include ZIP Co	de)	THE THE STATE OF A CASE OF A STATE OF A STAT	ite Echruso	15 2017	
	to the set of hourse existing their sectors are substituted as the highest end highest end with the sectors of		reordary	15, 2017	
		Te	•	(Include Area Code)	
Coldwater, MI 490)36 	re-magnessed marketing to the state of	(517) 27	0-7339 	
Technical Director		y *	Registere	ed Professional Engineer	
Chief Operator		✓	Technica	l Consultant	
Other (specify)					

ENGINEERING REPORT

PARTIAL PROOF OF PERFORMANCE

WKZO(AM) – Kalamazoo, MI

- 1. Replacement of Tower
- Changes to Nearby Cellular Tower
 Change in Monitor Point Limits
 Updated MP information

February, 2017

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TABLE OF CONTENTS

- 1. Table of Contents
- 2. Certification of Engineer
- 3. Discussion of Report
- 4. Exhibit 1.1 -Tabulation of Nighttime Radials 85.0°T & 117.5°T
- 5. Exhibit 1.2 -Tabulation of Nighttime Radials 173.0°T & 250.0°T
- 6. Exhibit 1.3 Tabulation of Nighttime Radials 266.0°T & 295.0°T
- 7. Exhibit 2.1 -Tabulation of Nighttime Ratios and Monitor Point Limits
- 8. Exhibit 3.1 to 3.7 Updated monitor point descriptions and pictures at each location

CERTIFICATION OF ENGINEERS

The firm of Munn-Reese, Broadcast Engineering Consultants, with offices at 385 Airport Drive, Coldwater, Michigan, has been retained for the purpose of preparing the technical data forming this report.

The data utilized in this report is based on field measurements made by the undersigned, or others under the supervision of the undersigned, on the dates and times indicated in the report.

The report has been prepared by properly trained electronics specialists under the direction of the undersigned whose qualifications are a matter of record before the Federal Communications Commission.

I declare under penalty of perjury that the contents of this report are true and accurate to the best of my knowledge and belief.

February 15, 2017

MUNN-REESE

Richard P. Grzebik, Project Engineer

385 Airport Drive, PO Box 220 Coldwater, Michigan 49036

Telephone: 517-278-7339

DISCUSSION

The firm of Munn-Reese was retained to prepare this report detailing a Partial Proof of Performance on AM Radio Station WKZO(AM), Kalamazoo, MI. WKZO(AM) operates on 590 kHz with 5.0 kW of daytime non-directional power and 5.0 kW of four tower directional nighttime power.

This Partial Proof of Performance was necessitated by the dual factors of the replacement one of WKZO(AM) towers due to severe weather activity damage and the changes to antennas and feedlines on a cellular telephone tower on the property of the AM array during the reconstruction to replace the damaged WKZO(AM) tower. The damaged Tower 1 was a four legged self-supported structure. The replacement tower is a guyed uniformed cross-section structure, equal in electrical length to the previous tower. Since the storm damage to Tower 1 was unexpected, no recent before measurements were obviously made on the night radials. Therefore, once the replacement of Tower 1 was completed, the cellular tower's three wire detuning skirt was detuned after changes on it were completed, and the WKZO(AM) night array was tuned for monitor points to be within limits. Following this, measurements were taken on the six nighttime monitor point radials and compared against the original 1959 full proof of performance.

Directional field strength measurements were conducted by Mr. Richard P. Grzebik, an engineer in the employ of Munn-Reese. Mr. Grzebik made his measurements using Potomac Instruments Field Intensity Meter, Model #FIM-41, S/N 1149 last calibrated May 23, 2016.

Measurements were taken on the six (6) nighttime monitor point radials, meeting the requirements of 47 C.F.R. §73.154 of the FCC Rules. Field strength measurements were taken on the dates and at the times indicated in the respective Tabulations of Field Strength Measurements, shown as *Exhibit(s) 1.1–1.3*. The tabulation sheets show the distance from the transmitter site to each point in units of kilometers. The locations and point numbers were derived from the 1959 full proof of performance and were located using topographical mapping with the assistance of GPS computer software.

Exhibit(s) 2.1 provides a summary of the field intensity measurements made on the nighttime directional operation as well as tabulations and calculations for the new monitor point values and limits. All radials fall within the presently licensed augmented pattern values and all monitor point values fall within the presently licensed limits. Therefore, the cellular tower modifications and the replacement of damaged Tower 1 has had no adverse effect on the WKZO(AM) antenna array.

Also upon completion of the partial proof of performance, it was noted while all six MP points were within FCC limits, Four of the six MP points can be relicensed with higher values as noted by the partial proof of performance results. The remaining two MP points limits need not be modified.

Exhibit(s) 3.1-3.7 provide updated monitor point descriptions and pictures at each location. Updates include coordinates in NAD27, additional descriptions, and corrections of typographical errors, which include distances on the MP's for 266 and 295.

Exhibit 1.1

<u>Tabulation of Nighttime Radials 85.0°T & 117.5°T</u>

Call:			WKZO			Frequency (kHz):	590	Power (kW):	5.00
						Bearing (°T):	85°		
de of a high redución may come some gray			1959 Night		2016 Night			1959-2016	
Point	Dist	Dist	Directional		Directional			Direct	
##	mi	km	mV/m	Date	mV/m	Time	Date	Ratio	
303	4.40	7.08	3.80	Aug-59	6.00	1619	09/27/16	1.5789	MP
305	5.55	8.93	4.10	Aug-59	4.60	1626	09/27/16	1.1220	
306	6.81	10.96	1.95	Aug-59	1.90	1632	09/27/16	0.9744	
309	9.05	14.56	1.05	Aug-59	1.50	1657	09/27/16	1,4286	
310	10.07	16.21	0.94	Aug-59	1.20	1704	09/27/16	1.2766	***************************************
311	10.66	17.15	0.83	Aug-59	1.05	1710	09/27/16	1.2651	
312	11.58	18.64	0.90	Aug-59	0.90	1717	09/27/16	1.0000	
313	12.70	20.44	0.95	Aug-59	0.90	1723	09/27/16	0.9474	
							Log Ratio:	1.1805	

Call:	1)		WKZO			Frequency (kHz):	590	Power (kW):	
						Bearing (°T):	117.5°		
								1959-2016	
Point	Dist	Dist	1959 Night Directional		2016 Night Directional			Direct	
#	mi	km	mV/m	Date	mV/m	Time	Date	Ratio	
424	1.79	2.88	40.00	Aug-59	54.0	1449	10/03/16	1.3500	MP
423	2.25	3.62	31.50	Aug-59	39.0	1455	10/03/16	1.2381	
421	3.04	4.89	15.50	Aug-59	17.0	1506	10/03/16	1.0968	
421	3.96	6.37	12.50	Aug-59	15.0	1517	10/03/16	1.2000	
418	5.04	8.11	8.70	Aug-59	10.8	1528	10/03/16	1.2414	
415	8.41	13.53	3.25	Aug-59	3.8	1553	10/03/16	1.1692	
414	8.91	14.34	3.80	Aug-59	4.1	1603	10/03/16	1.0789	
413	9.50	15.29	3.80	Aug-59	3.9	1611	10/03/16	1.0263	
							Log Ratio:	1.1710	

Exhibit 1.2 Tabulation of Nighttime Radials 173.0°T & 250.0°T

Call:			WKZO			Frequency (kHz):	590	Power (kW):	5.00
						Bearing (°T):	173°		
Point	Dist	Dist	1959 Night Directional		2016 Night Directional			1959-2016 Direct	
#	mi	km	mV/m	Date	mV/m	Time	Date	Ratio	
609	2.84	4.57	71.00	Aug-59	56.0	1352	10/04/16	0.7887	
610	3.53	5.68	58.00	Aug-59	48.0	1357	10/04/16	0.8276	MP
611	3.72	5.99	53.00	Aug-59	42.0	1401	10/04/16	0.7925	
613	4.80	7.72	43.00	Aug-59	33.5	1427	10/04/16	0.7791	
614	5.70	9.17	33.00	Aug-59	27.2	1436	10/04/16	0.8242	
615	6.21	9.99	24.50	Aug-59	21.0	1442	10/04/16	0.8571	
617	12.26	19.73	15.50	Aug-59	8.3	1511	10/04/16	0.5355	
619	15.29	24.61	9.30	Aug-59	6.3	1527	10/04/16	0.6774	
							Log Ratio:	0.7529	

Call:			WKZO			Frequency (kHz):	590	Power (kW):	5.00
						Bearing (°T):	250°		
	<u> </u>	ļ	10.50 111					1959-2016	
Point	Dist	Dist	1959 Night Directional		2016 Night Directional			Direct	
##	mi	km	mV/m	Date	mV/m	Time	Date	Ratio	
800	1.50	2.41	13.50	Aug-59	24.00	1420	10/03/16	1.7778	••
803	3.10	4.99	5.70	Aug-59	12.50	1353	10/03/16	2.1930	MP
804	3.60	5.79	3.60	Aug-59	7.90	1347	10/03/16	2.1944	
805	4.69	7.55	4.50	Aug-59	6.80	1207	10/03/16	1.5111	
810	9.47	15.24	1.05	Aug-59	1.35	1246	10/03/16	1.2857	
811	10.08	16.22	1.30	Aug-59	1.50	1252	10/03/16	1.1538	
813	11.30	18.18	0.54	Aug-59	1.07	1304	10/03/16	1.9815	
814	11.75	18.91	0.75	Aug-59	0.83	1311	10/03/16	1.1067	
							Log Ratio:	1.5958	

Exhibit 1.3

<u>Tabulation of Nighttime Radials 266.0°T & 295°T</u>

Call:			WKZO			Frequency (kHz):	590	Power (kW):	5.00
						Bearing (°T):	266°		
Point	Dist	Dist	1959 Night Directional		2016 Night Directional			1959-2016 Direct	
#	mi	km	mV/m	Date	mV/m	Time	Date	Ratio	~~~
905	3.43	5.52	2.40	Aug-59	7.30	1450	09/27/16	3.0417	
906	4.35	7.00	2.30	Aug-59	5.40	1429	09/27/16	2.3478	MP
908	6.36	10.23	0.77	Aug-59	2.30	1412	09/27/16	2.9870	
909	6.88	11.07	1.05	Aug-59	2.30	1405	09/27/16	2.1905	
910	7.39	11.89	1.00	Aug-59	2.70	1353	09/27/16	2.7000	
911	8.70	14.00	0.64	Aug-59	1.10	1347	09/27/16	1.7188	F-10-40-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
912	9.18	14.77	0.73	Aug-59	1.25	1340	09/27/16	1.7123	
915	12.70	20.44	0.44	Aug-59	0.90	1323	09/27/16	2.0455	
							Log Ratio:	2.2912	

Call:			WKZO			Frequency (kHz):	590	Power (kW):	5.00
						Bearing (°T):	295°		
								1959-2016	
Point	Dist	Dist	1959 Night Directional		2016 Night Directional			Direct	
#	mi	km	mV/m	Date	mV/m	Time	Date	Ratio	
1101	2.25	3.62	79.00	Aug-59	62.0	1147	09/27/16	0.7848	
1103	3.74	6.02	32.50	Aug-59	25.0	1200	09/27/16	0.7692	
1104	4.83	7.77	27.50	Aug-59	19.8	1207	09/27/16	0.7200	MP
1105	6.00	9.66	19.50	Aug-59	15.5	1220	09/27/16	0.7949	
1107	8.14	13.10	13.50	Aug-59	10.5	1235	09/27/16	0.7778	
1109	10.19	16.40	11.00	Aug-59	6.8	1251	09/27/16	0.6182	
1110	10.70	17.22	9.10	Aug-59	7.0	1257	09/27/16	0.7692	
1111	12.00	19.31	7.90	Aug-59	5.4	1303	09/27/16	0.6835	
							Log Ratio:	0.7373	

Exhibit 2.1

<u>Tabulation of Nighttime Ratios</u>

	1959 Proof		2006 Partial	Augmented
Azimuth	DA	16 DA/59 DA	Measured Pat	Std Pat
(° True)	(mV/m/km)	(Log Ratio)	(mV/m/km)	(mV/m/km)
85.0°T	33.79	1.1805	39.9	57.9
117.5°T	136.79	1.1710	160.2	188.0
173.0°T	386.22	0.7529	290.8	498.9
250.0°T	40.23	1.5958	64.2	97.6
266.0°T	20.92	2.2912	47.9	64.4
295.0°T	297.71	0.7373	219.5	342.6

Radial	Currently Licensed MP Limit (mV/m)	2016 Partial MP Value (mV/m)	New MP Limit Requested (mV/m)
85.0°T	6.36	6.0	8.71
117.5°T	68.55	54,0	(none requested)
173.0°T	65.00	48.0	82.35
250.0°T	13.00	12.50	19.0
266.0°T	6.10	5.40	7.26
295.0°T	34.14	19.8	(none requested)

	Licensed Values	2016 Partial Values
Antenna Input Power	5,400 watts	5,400 watts
Common Point	8.35 amperes	8.32 amperes
Antenna Monitor	Current	Current
Tower #1	1.000	1.000
Tower #2	0.577	0.750
Tower #3	0.950	1.460
Tower #4	0.870	0.970
Antenna Phase	Degrees	Degrees
Tower #1	0.0°	0.0°
Tower #2	-95.6°	-83.8°
Tower #3	4.0°	13.0°
Tower #4	72.0°	77.0°

Exhibit 3.1 <u>Updated Monitor Point Descriptions</u>

DESCRIPTION OF AND FIELD INTENSITY MEASURED AT MONITORING POINTS:

Direction of 85 True North: From the transmitter, go east 0.6 miles on McKinley Ave. to Riverview Dr., turn right and go 0.45 miles southwest on Riverview Dr. to Mt. Olivet Rd. Turn left onto Mt. Olivet Rd. and go 0.95 miles to Howlandsburg Rd. Turn left onto Howlandsburg Rd. and go 2.16 miles to Hwy. M-43, then turn left and go northeast 1.95 miles to County Rd. EF. The measuring location is on the west edge of M-43 Hwy. directly across the road from the Kalamazoo Plug Co. This location is 4.40 miles/7.08 km from transmitter. Coordinates in NAD27 are 42-21-17.1 N, 85-28-41.5 W. The field intensity measured at this point should not exceed 8.71 mV/m.

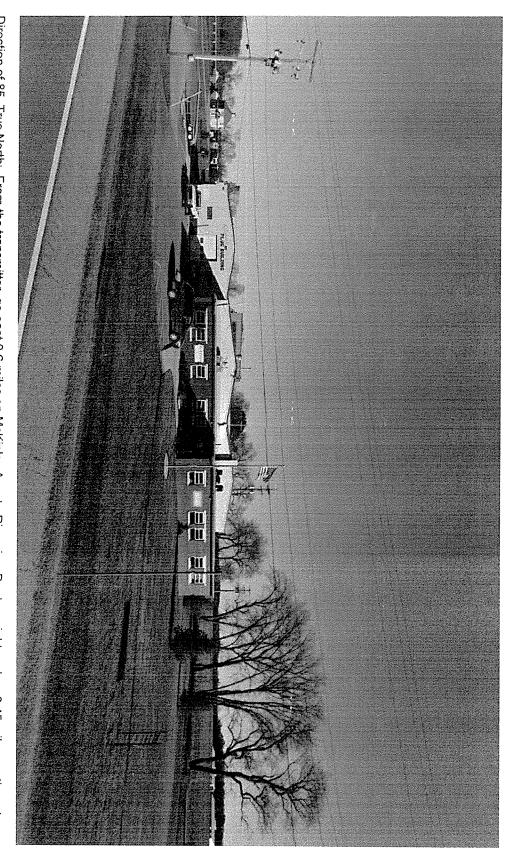
Direction of 117.5 True North: From the transmitter, proceed east on McKinley Ave. 0.6 miles to Riverview Rd. Proceed southwest 0.45 miles to Mt. Olivet Rd. Proceed southeast, then south 0.95 miles to Howlandsburg Rd. Turn east and proceed 0.75 miles to 24th St. Turn north and proceed 0.3 miles north to the monitor point. The measuring location is on the east edge of the road, even with fence line to east, south of driveway at 5370 24th St. This location is 1.79 miles/2.88 km from transmitter. Coordinates in NAD27 are 42-20-15.0 N, 85-31-52.4 W. The field intensity measured at this point should not exceed 68.55 mV/m.

Direction of 173 True North: From the transmitter, proceed east on McKinley Ave. 0.6 miles to Riverview Rd. Proceed southwest and south 4.0 miles to Sherwood Ave. Proceed east 0.38 miles to E. Main St. Proceed east on E. Main St. 0.52 miles to Chicago Ave. Proceed south 0.22 miles to Church of God of Prophecy on west side of street. This location is 3.53 miles/5.68 km from transmitter. Coordinates in NAD27 are 42-17-55.8 N, 85-33-10.3 W. The field intensity measured at this point should not exceed 82.35 mV/m.

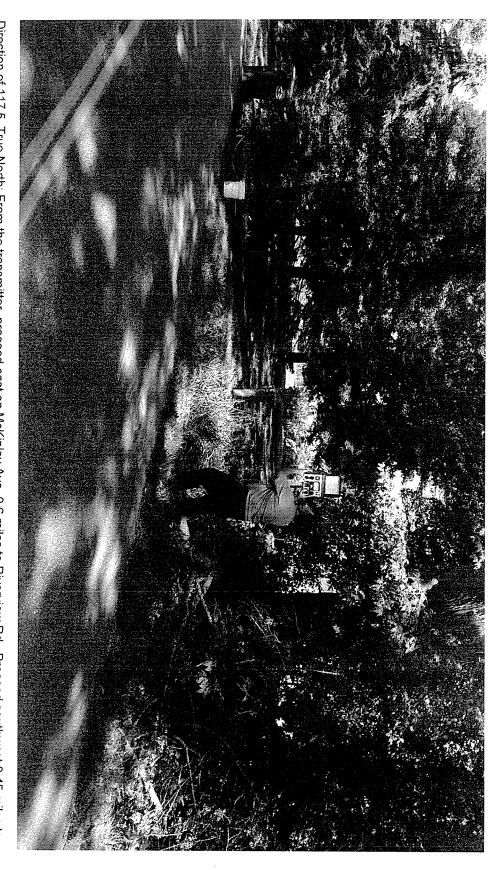
Direction of 250 True North: From the transmitter, proceed east on McKinley Ave. 0.6 miles to Riverview Rd. Proceed north 1.83 miles to D Ave. Proceed west 3.9 miles to 14th St. Proceed south 3.0 miles to G Ave. Proceed east 0.5 miles to monitor point. Measuring location is at South edge of road at point, in line with storage garage to north and garage to south. This location is 3.1 miles/4.99 km from transmitter. Coordinates in NAD27 are 42-19-58.5 N, 85-37-08.5 W. The field intensity measured at this point should not exceed 19.0 mV/m.

Direction of 266 True North: From the transmitter, proceed east on McKinley Ave. 0.6 miles to Riverview Rd. Proceed north 1.83 miles to D Ave. Proceed west 4.9 miles to 12th St. Proceed south on 12th St. 2.3 miles to the monitor point. The measuring location is on the west side of 12th St., even with north edge of driveway at 5684 12th St. This location is 4.35 miles/7.00 km from transmitter. Coordinates in NAD27 are 42-20-34.4 N, 85-38-49.1 W. The field intensity measured at this point should not exceed 7.26 mV/m.

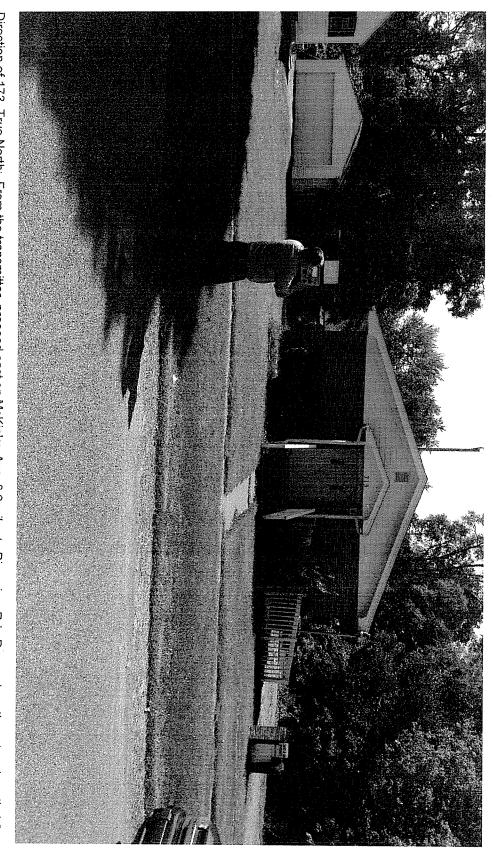
Direction of 295 True North: From the transmitter, proceed east on McKinley Ave. 0.6 miles to Riverview Rd. Proceed left and go north 1.83 miles to D Ave., turn left onto D Ave. and go west 4.9 miles to 12th St. The measuring location is on the northeast corner of the intersection of 12th St. and D Ave. 10 feet east of the stop sign. This location is 4.83 miles/7.77 km from transmitter. Coordinates in NAD27 are 42-22-35.6 N. 85-38-56.0 W. The field intensity measured at this point should not exceed 34.14 mV/m.



directly across the road from the Kalamazoo Plug Co. This location is 4.40 miles/7.08 km from transmitter. Coordinates in NAD27 are 42-21-17.1 miles to Hwy. M-43, then turn left and go northeast 1.95 miles to County Rd. EF. The measuring location is on the west edge of M-43 Hwy. N, 85-28-41.5 W. The field intensity measured at this point should not exceed 8.71 mV/m. Riverview Dr. to Mt. Olivet Rd. Turn left onto Mt. Olivet Rd. and go 0.95 miles to Howlandsburg Rd. Turn left onto Howlandsburg Rd. and go 2.16 Direction of 85 True North: From the transmitter, go east 0.6 miles on McKinley Ave. to Riverview Dr., turn right and go 0.45 miles southwest on



driveway at 5370 24th St. This location is 1.79 miles/2.88 km from transmitter. Coordinates in NAD27 are 42-20-15.0 N, 85-31-52.4 W. The field proceed 0.3 miles north to the monitor point. The measuring location is on the east edge of the road, even with fence line to east, south of Direction of 117.5 True North: From the transmitter, proceed east on McKinley Ave. 0.6 miles to Riverview Rd. Proceed southwest 0.45 miles to intensity measured at this point should not exceed 68.55 mV/m. Mt. Olivet Rd. Proceed southeast, then south 0.95 miles to Howlandsburg Rd. Turn east and proceed 0.75 miles to 24th St. Turn north and

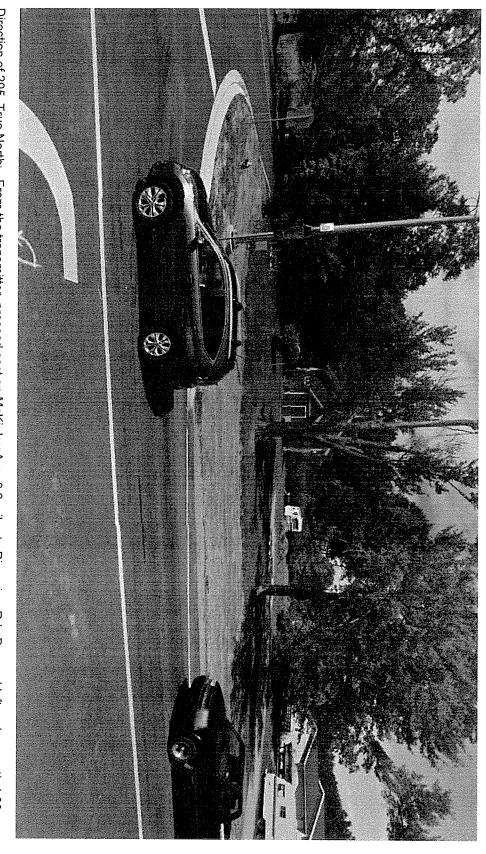


55.8 N, 85-33-10.3 W. The field intensity measured at this point should not exceed 82.35 mV/m. miles to Church of God of Prophecy on west side of street. This location is 3.53 miles/5.68 km from transmitter. Coordinates in NAD27 are 42-17miles to Sherwood Ave. Proceed east 0.38 miles to E. Main St. Proceed east on E. Main St. 0.52 miles to Chicago Ave. Proceed south 0.22 Direction of 173 True North: From the transmitter, proceed east on McKinley Ave. 0.6 miles to Riverview Rd. Proceed southwest and south 4.0

Exhibit 3.5 - WKZO(AM) 590 Khz - Kalamazoo, Michigan - 250° Monitor Point Location



edge of road at point, in line with storage garage to north and garage to south. This location is 3.1 miles/4.99 km from transmitter. Coordinates in Proceed west 3.9 miles to 14th St. Proceed south 3.0 miles to G Ave. Proceed east 0.5 miles to monitor point. Measuring location is at South NAD27 are 42-19-58.5 N, 85-37-08.5 W. The field intensity measured at this point should not exceed 19.0 mV/m. Direction of 250 True North: From the transmitter, proceed east on McKinley Ave. 0.6 miles to Riverview Rd. Proceed north 1.83 miles to D Ave.



miles to D Ave., turn left onto D Ave. and go west 4.9 miles to 12th St. The measuring location is on the northeast corner of the intersection of 12th St. and D Ave. 10 feet east of the stop sign. This location is 4.83 miles/7.77 km from transmitter. Coordinates in NAD27 are 42-22-35.6 N, 85-38-56.0 W. The field intensity measured at this point should not exceed 34.14 mV/m. Direction of 295 True North: From the transmitter, proceed east on McKinley Ave. 0.6 miles to Riverview Rd. Proceed left and go north 1.83