10	C Form 352	UNITED STATES OF AMERICA File No. : BS-940429
1912 /	، ۲	PEDERAL COMMUNICATIONS COMMISSION AM BROADCAST STATION LICENSE Call Sign :WIX Z-W?T
LIC	CENSEE:	SERENA COMMUNICATIONS, INC. FAC ID 59695 TWO SITE OPERATION
1. 2.	Community of License : McKer Transmitter location : DAY: Calvary Cemetary on Br Pittsburgh, PA NIGHT Township, PA North Latitude : DAY: West Longitude : NIGHT:	 a. Transmitter(s): Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's rules) a. Main Studio Location: (See Section 73.1125) b. Main Studio Location: (See Section 73.1125) c. Lincoln b. Main Studio Location: (See Section 73.1125) c. Lincoln Highway East McKeesport, PA c. Remote control location d0° 24' 30" 79° 55' 40" c. Remote control location d00 Lincoln Highway East McKeesport, PA
6	Antonno and ground system:	
7	SEE ATTA	ACHED
NI 8.	GHT: TOWER NOS. 1 and 5 Frequency	3: 1, 3, 12 and 21; TOWER NOS. 2 and 4: NONE REQUIRED 1360 KHz
9.	Nominal power (kW) : Antenna input power (kW) : 5.0Day	5.0 Day 1.0 Night Image: Non-directional antenna: current 7.73 amperes: resistance 83.5 ohms. Image: Directional antenna 1.0 Night 1.0 Night
	1.08 Night	☐ Non-directional antenna: current4.65 amperes: resistance50ohms.
10.	Hours of operation : Unlimited.	
11.	Conditions :	
Subj and appa Th deci Th exte Th auth subj	ject to the provisions of the Communicati further subject to conditions set forth in aratus herein described for the purpose of August 1, 1998 The Commission reserves the right during said license period ision of the Commission rendered as a result of any hearin he license is issued on the licensee's representation that the with, will be carried out in good faith. The licensee shall, of ant of the privileges herein conferred. It is license shall not vest in the licensee any right to operate horized herein. Neither the license nor the right granted he ject to the right f or control by the Government of the Unite s license consists of this page and pages	ons Act of 1934, as amended, subsequent Acts, Treaties, and Commission rules made thereunder this license, ¹ the LICENSEE is hereby authorized to use and operate the radio transmitting of broadcasting for the term ending 3 A.M. Local Time d of terminating this license or making effective any change, or modification of this license which may be necessary to comply with any g held under the rules of the Commission prior to the commencement of this license period. e statements contained in the licensee's application are true and that the undertakings therein contained so far as they are consistent during the term of this license, render such broadcasting service as will serve the public interest, convenience, or necessity to the full the station nor any right in the use of the frequency designated in the license beyond the term hereof, nor in any other manner than reunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. This license is d States conferred by section 606 of the Communications Act of 1934, as amended. DFL 2, 3, 4 and 5COMMUNICATIONS
Date	d: JUN 2 0 1994	COMMISSION

No.

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1. DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

No. and Type of Elements: DAYTIME is a vertical, guyed, series excited steel radiator of uniform cross section. **NIGHTTIME** system is four (4) vertical, self supporting, series excited tapered steel radiators, with a FM antenna mounted on tower #2. Nighttime Theoretical RMS: 300.95 mV/m at 1 km; Augmented RMS: 318.59 mV/m at 1 km. Q = 10.17.

Height above Insulators:	DAYTIME NIGHTTIME 61.9 m (101°)	#1 61 m	#2 61 m (99.5°)	#3 61 m)	#4 61 m
Overall Height:	63.1 m	63.1 n	n 96.2 n	n 62 m	62.4 m

Spacing and Orientation: Towers are located at the corners of a rectangle; long sides are spaced 210° on a line bearing 85.8° true, the short sides are spaced 90° on a line bearing 355.8° true.

Non-Directional Antenna: Theoretical Efficiency: 312.21 mV/m/kW at 1 km.

Daytime Ground System consists of 120 equally spaced, buried, copper radials 64 m in length, plus a 7.3 m by 7.3 m ground screen.

Nighttime Ground System consists of 250 equally spaced, buried, copper radials about the base of each tower 76.2 m in length, plus a 12.2 m by 12.2 m ground screen about the base of each tower.

2.	THEORETICA Towers:	L SPECIF	#1(NW)	#2(SW)	#3(SE)	#4(NE)
	Phasing:	Night:	-116°	25°	0°	-143°
	Field Ratio:	Night:	0.80	0.85	1.0	0.75
3.	OPERATING S Phase Indicati	PECIFIC on*: Night:	ATIONS -137.5°	15.8°	0°	-144.9°
	Antenna Base Current Ratio:	Night:	0.77	0.70	1.0	0.77

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Antenna Monitor	Sample				
Current Ratio:					
	Night:	1.013	0.869	1.0	0.928

* As indicated by Gorman Redlich CMR 101 Antenna Monitor. Antenna sampling system approved under Section 73.68 (b) of the Rules. File No.: BS-940429

DESCRIPTION OF AND FIELD INTENSITY MEASURED AT MONITORING POINTS:

Direction of 72.5° True North. From the transmitter site entrance, proceed west on W. Calhoun Road 0.5 mile to Port Vue Road. Turn left and proceed 0.5 miles south to West Smithfield Road. Turn left onto this road and follow 1.7 miles northeast to the intersection with the Boston Bridge. Turn left and cross the bridge, proceed 1/4 mile, straight to the intersection with Center Street. Turn right on Center Street and proceed 1.8 mile east to a "Y" intersection. Proceed straight onto Center Street Extension for 1.9 mile east to a curve with a white tank in a pulloff near the White Oak Farms apartment complex. The monitor point is located in the pulloff beside the road curve. The distance from the array is 2.73 miles. The field intensity measured at this point should not exceed 12.1 mV/m.

Direction of 105° True North. From the transmitter site entrance, proceed west on W. CalHoun Road 0.5 mile to Port Vue Road. Turn left and proceed 0.5 mile south to West Smithfield Road. Turn left onto this road and follow 1.7 miles northeast to the intersection with the Boston Bridge. Immediately bear right onto Renzie Road and follow 0.9 mile southeast to Country Club Road. Turn left onto this road and proceed 0.4 mile northeast to the intersection with Golf View Road. The monitor point is located in front of the red brick house 100 feet from that road intersection, and near Golf View Road edge. The distance from the array is 2.01 miles. The field intensity measured at this point should not exceed <u>14 mv/m</u>.

Direction of 215° True North. From the transmitter site entrance, proceed west on W. Calhoun Road 0.5 mile to Port Vue Road. Turn right and proceed north 0.5 mile to Belle Bridge Road. Turn left onto this road and follow downhill 1.1 mile to the intersection with Glassport Road. Turn left onto this road and follow south 2.0 miles into Elizabeth Boro and the intersection with Long Street. Turn right onto this street and proceed north 0.15 mile across the railroad tracks to a small red brick house on the right, beside the tracks. The Old Wiley Railroad Station is behind the house. The monitor point is located on Long Street in front of the red brick house. The distance from the array is 2.68 miles. The field intensity measured at this point should not exceed <u>6.1 mV/m</u>.

Direction of 255° True North. From the transmitter site entrance, proceed west on W. Calhoun Road 0.5 mile to Port Vue Road. Turn right and proceed north 0.5 mile to Belle Bridge Road. Turn left onto this road and follow downhill 1.1 mile to the intersection with Glassport Road. Turn right onto this road and follow north 0.4 mile past Bellbridge Auto Wreckers to a fireplug on the left (westerly) side of the road. The monitor point is located beside this fireplug. Pictured in the background is the Monongahela River and the famous U.S. Steel Clairton Coke Works. The distance from the array is 1.15 miles. The field intensity measured at this point should not exceed 23 mV/m.

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DESCRIPTION OF AND FIELD INTENSITY MEASURED AT MONITORING POINTS:

Direction of 284.5° True North. From the transmitter site entrance, proceed west on W. Calhoun Road 0.5 mile to Port Vue Road. Turn right and proceed north 0.5 mile to Belle Bridge Road. Turn left onto this road and follow downhill 1.1 mile to the intersection with Glassport Road. Turn right onto this road and follow north 2.0 mile to the Westinghouse plant entrance just inside the Glassport Boro limits. Across Glassport from the plant is a Shop 'N Save food store and a parking lot. The monitor point is located 50 feet in front of the store in the parking lot opposite the Westinghouse plant entrance from the array is 2.23 miles. The field intensity measured at this point should not exceed <u>14 mV/m</u>.

Direction of 307° True North. From the transmitter site entrance, proceed west on W. Calhoun Road 0.5 mile to Port Vue Road. Turn right and proceed north 1.0 mile to an intersection with Washington Boulevard. Turn left onto this road and proceed northwest 1.1 mile to Edmudston Road. Turn right onto this road and proceed northward 0.15 mile to a clear spot near an old yellow house. The monitor point is located on the westerly road edge near this house. The distance from the array is 1.77 miles. The field intensity measured at this point should not exceed <u>10 mV/m</u>.