

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
AM BROADCAST STATION LICENSE

File No. : BL-890817AC
FNC ID : 35900
Call Sign : KWTO

LICENSEE:

Cole Media, Inc.

1. Community of License: Springfield, MO.

2. Transmitter location: 0.31 mi. east of intersection
of U.S. Route 65 & County
Road EE., Christian County
Selmore, Missouri

North latitude: 36 ° 56 ' 40 "
West longitude: 93 ° 13 ' 17 "

3. Transmitter(s): Type Accepted. (See Sections 73.1660,
73.1665 and 73.1670 of the Commission's rules)

4. Main Studio location: (See Section 73.1125)

2750 S. Campbell Street
Greene County
Springfield, Missouri

5. Remote control location:

(Same)

6. Antenna and ground system: Attached

7. Obstruction marking and lighting specifications - FCC Form 715, paragraphs: 1, 3, 12 and 21.

8. Frequency: 560 kHz

9. Nominal power (kW): 5.0 kw Day 4.0 kw Night

Antenna input power (kW):

5.4 Day ☐ Non-directional antenna:
☒ Directional antenna : current 10.4 amperes; resistance 50 ohms.

4.32 Night ☐ Non-directional antenna:
☒ Directional antenna : current 9.3 amperes; resistance 50 ohms.

10. Hours of operation: Specified in BP-870528AD and BMP-890424AH

11. Conditions: Attached

Subject to the provisions of the Communications Act of 1934, as amended, subsequent Acts, Treaties, and Commission rules made thereunder, and further subject to conditions set forth in this license,¹ the LICENSEE is hereby authorized to use and operate the radio transmitting apparatus herein described for the purpose of broadcasting for the term ending 3 A.M. Local Time
February 1, 1997

The Commission reserves the right during said license period of terminating this license or making effective any change, or modification of this license which may be necessary to comply with any decision of the Commission rendered as a result of any hearing held under the rules of the Commission prior to the commencement of this license period or any decision rendered as a result of any such hearing which has been designated but not held, prior to the commencement of this license period.

The license is issued on the licensee's representation that the statements contained in the licensee's application are true and that the undertakings therein contained so far as they are consistent herewith, will be carried out in good faith. The licensee shall, during the term of this license, render such broadcasting service as will serve the public interest, convenience, or necessity to the full extent of the privileges herein conferred.

This license shall not vest in the licensee any right to operate 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 authorized herein. Neither the license nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. This license is subject to the right of use or control by the Government of the United States conferred by Section 606 of the Communications Act of 1934, as amended.

¹ This license consists of this page and pages 2, 3, 4 and 5

Dated: NOV 21 1990

JS/ed

FEDERAL
COMMUNICATIONS
COMMISSION



NOV 23 1990

June 1980

File NO. BL-890817AC

Call Sign: KWTO

Date: 10/26/89

DA-2, U

1. DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

No. and Type of Elements: Five (5), vertical, guyed, series-excited steel radiators. Theoretical RMS: 691.40 mV/m @ 1 km (day); 661.00 mV/m @ 1 km (Night); Aug. RMS: 732.28 mV/m @ 1 km (Day); 696.80 mV/m @ 1 km (Night). Q = 23.10 (day); Q = 22.1 (Night). 2 Communications Type antennas sidemounted E(#4) tower.

Height above Insulators: Towers #1, #2 & #5: 118.9 m; (80°) Tower #3: 133.8 m (90°); Tower #4: 148.7 m (100° + 28° toploading.).

Overall Height: Towers #1, #2 & #5: 121.3 m; Tower #3: 136.2 m; Tower #4: 151.2 m.

Spacing and Orientation: With Tower #1 (SW) as reference, Tower #2 (NW) is spaced 242° on a line bearing 60° T; Tower #4 (SE) is spaced 90° on a line bearing 89° T; Tower #5 (W) is spaced 130.6° on a line bearing 310.8° T. Tower #3 (NE) is spaced 323.7° on a line bearing 67.7° T.

Non-Directional Antenna: None Used

Ground System consists of 120 equally spaced, buried copper radials about the base of each tower 134 m in length except where terminated by property boundaries or where intersecting radials are shortened and bonded, plus a 15 m by 15 m ground screen about the base of each tower.

2. THEORETICAL SPECIFICATIONS

	Tower	#1(SW)	#2(NW)	#3(NE)	#4(SE)	#5(W)
Phasing	Night:	-121.9°	-148.7°	-30.8°	0°	-146.1°
	Day	-91.0°	-114.5°	52°	0°	- -
Field Ratio:	Night	0.951	0.952	0.932	1.0	0.107
	Day	0.939	0.968	0.726	1.0	- -

3. OPERATING SPECIFICATIONS

Antenna Base Current Ratio:

Night <u>1/</u>	0.883	1.00	0.748	0.288	0.098
Day:	0.867	1.00	0.544	0.318	- -

Potomac Instruments AM-19 D (210) with PMA-19 Adaptor indications:

Phase Indication:	Night <u>2/</u>	21.2°	0°	116.4°	140.1°	34.7°
	Day	25.6°	0°	170.1°	109.5°	- -

Antenna Monitor

Sample Current	Night	0.915	1.00	0.771	0.290	0.108
	Day	0.955	1.00	0.572	0.322	- -

Sample Current

Deviation	Night <u>3/</u>	0%	0%	0%	0%	0%
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FCC Form 353-A
KWTO(AM)

Precision Adaptor

Attenuator Values Night: 10.06 9.05 11.65 30.18 84.48

- 1/ Permissible diviations from these values shall not exceed $\pm 5\%$.
- 2/ Permissible diviations from these values shall not exceed $\pm 1.2^\circ$.
- 3/ Permissible diviations from these values shall not exceed $\pm 2.1\%$.

Antenna sampling system approved under section 73.68(b) rules.

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DESCRIPTION OF AND FIELD INTENSITY AT MONITORING POINTS:

Direction of 26.5 degree True North. From the KWTO transmitter site, go south to county road "Old 65-8," turn left (E) and proceed 1.05 km (0.65 mi.). Turn left (N) on road "Old 65-5" and proceed 2.01 km (1.25 mi.). Turn right (E) on "Old 65-5," proceed 0.35 km (0.22 mi.). Turn left (N) on "Old 65-7" and proceed 1.21 km (0.75 mi.). Turn right on "Old 65-7" and proceed 0.16 km (0.10 mi.) to the 26.5-degree monitor point. The point is located at the north edge of the roadbed, 3.65 meters (12 feet) due south of telephone company cable splice box number 5L-18.4, just west of the culbert in the north ditch. Radial Point Number 13. Distance from transmitter 3.35 km. The field intensity measured at this point should not exceed 14.4 mV/m Nighttime.

Direction of 189 degree True North. From the KWTO transmitter site, go south to county road "Old 65-8." Turn right (W) and proceed 0.80 km (0.50 mi.). Turn right (N) on "Old 65-1" and proceed 0.40 km (0.25 mi.). Turn left (W) on state road "EE" and then immediately turn left (S) again on U.S. Route 65. Proceed 6.76 km (4.20 mi.). Turn left (E) on "65-68" and proceed 0.32 km (0.20 mi.) to turn-around at end of road. Point is located at the northwest edge of the turn-around area where white road rock turns to brown rock. Radial Point Number 11. Distance from Transmitter 6.39 km. The field intensity measured at this point should not exceed 3.5 mV/m Nighttime.

Direction of 97.5 degree True North. From the KWTO transmitter site, go south to county road "Old 65-8." Turn left (E) and proceed 5.31 km (3.30 mi.) to State Road "W." Turn right (E) and follow Route "W" south 1.61 km (1.00 mi.) to 97.5-degree monitor point. The point is located at the west edge of the pavement directly across the road from a steel, field access gate on the east and in line with the pond bank on the west. Radial Point Number 11. Distance from transmitter 4.90 km. The field intensity measured at this point should not exceed 14.4 mV/m Nighttime.

Direction of 138 degree True North. From the KWTO transmitter site, go south to county road "Old 65-8," turn left (E) and proceed 4.59 km (2.85 mi.). Turn right (S) on "W-19" and proceed 4.18 km (2.60 mi.) to 138-degree monitor point. Point is located at the east edge of the gravel road 152.4 meters (500 feet) south of an abandoned farm house 67.05 meters (220 feet) south of the power line intersection pole. Point is just west of a telephone company "Buried Cable" warning pole. Radial Point Number 12. Distance from Transmitter 4.47 km. The field intensity measured at this point should not exceed 20.0 mV/m Nighttime.

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DESCRIPTION OF AND FIELD INTENSITY AT MONITORING POINTS:

Direction of 182 degree True North. From the KWTO transmitter site, go south to county road "Old 65-8" and turn right (W). Proceed 0.80 km (0.50 mi.) and turn right (N) on "Old 65-1." Proceed 0.40 km (0.25 mi.), turn left (W) on state road "EE" and immediately turn left again (S) on U.S. Route 65. Proceed 7.72 km (4.80 mi.). Turn left (E) on "65-55L" and proceed 1.45 km (0.90 mi.) to 182-degree monitor point. The point is located 134 meters (440 feet) up the hillside from the house just at the turn in the road where it turns back to the east. The point is located at the north edge of the roadbed. Radial Point Number 10. Distance from Transmitter 7.06 km. The field intensity measured at this point should not exceed 52.7 mV/m Daytime.

Direction of 198.5 degree True North. From KWTO transmitter site, go south to county road "Old 65-8." Turn right (W) and proceed 0.80 km (0.50 mi.). Turn right (N) on "Old 65-1" and proceed 0.40 km (0.25 mi.). Turn left on state road "EE" and then immediately turn left (S) again on U.S. Route 65. Proceed 4.59 km (2.85 mi.). Turn left (E) on "N65-55L" and proceed 0.24 km (0.15 mi.) to where "T" intersection with drive to south occurs. The monitor point is located in the center of the "T" intersection which is 76.2 meters (250 feet) southeast of the stone house. Radial Point number 10. Distance from Transmitter 4.75 km. The field intensity measured at this point should not exceed 81.4 mV/m Daytime.

Direction of 279 degree True North. From the KWTO transmitter site, go south to county road "Old 65-8." Turn right (W) and proceed 0.80 km (0.50 mi.). Turn right (N) on "Old 65-1" and proceed 0.40 km (0.25 mi.) and turn left straight across U.S. Route 65 onto state route "EE". Proceed 5.63 km (3.50 mi.) to U.S. Route 160 and turn right (N). Proceed 2.34 km (1.70 mi.) to the monitor point. The monitor point is located on the paved shoulder at the west edge of the road, 366 meters (1200 feet) north of the mailbox and turn-in to Ozark Orchards. Radial Point number 14. Distance from Transmitter 5.62 km. Th field intensity measured at this point should not exceed 50.4 mV/m Daytime.

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DESCRIPTION OF AND FIELD INTENSITY AT MONITORING POINTS:

Direction of 292.5 degree True North. From the KWTO transmitter site, go south to county road "Old 65-8." Turn right (W) and proceed 0.80 km (0.50 mi.). Turn right (N) on "Old 65-1" and proceed 0.40 km (0.25 mi.) and turn left straight across U.S. Route 65 onto state route "EE". Proceed 5.63 km (3.50 mi.) to U.S. Route 160. Turn right (N) and proceed 4.10 km (2.55 mi.) to the monitor point. The point is located on the paved east shoulder of the road 91.44 meters (300 feet) north of the intersecting road to the west and is 15.24 meters (50 feet) north of the east/west fence of the field to the east of the road. Radial Monitor Point 14. Distance from Transmitter 5.94 km. The field intensity measured at this point should not exceed 10.5 mV/m Nighttime.

Direction of 46 degree True North. From the KWTO transmitter site, go south to main road. Turn left (E) on county road "Old 65-8" and proceed 3.0 km (1.85 mi.). Turn left (N) on "W-12A" and proceed 1.77 km (1.10 mi.). Turn right (E) on "W12" and proceed 0.40 km (0.25 mi.), then turn left (N) on "W-8A" and proceed 1.61 km (1.00 mi.). Turn right (E) on W-8" and proceed 1.29 km (0.80 mi.) to the 46 degree monitor point. The point is located in the center of the road 137 meters (450 feet) east of the Prospect Church (150 feet east of the private drive on the north side of the road), directly south of the second utility pole on the north bank east of the drive. Radial Point Number 13. Distance from transmitter 5.36 km. The field intensity measured at this point should not exceed 86.5 mV/m Daytime.

Direction of 151 degree True North. From the KWTO transmitter site, go south to county road "Old 65-8" and turn left (E). Proceed 5.30 km (3.30 mi.) to state road "W." Turn right (E) and follow Route "W" south 6.19 km (3.85 mi.) which will be beyond the present end of the pavement which is where the road turns into "W-27." The point is at the west edge of the gravel roadbed 21.3 meters (70 feet) north of the yard fence to the house on the west side of the road, in line with the north wall of the hay barn. Radial Point Number 14. Distance from Transmitter 6.48 km. The field intensity measured at this point should not exceed 30.6 mV/m Daytime.