

#### United States of America

# FEDERAL COMMUNICATIONS COMMISSION AM BROADCAST STATION LICENSE

Authorizing Official:

Official Mailing Address:

CUMULUS LICENSING CORP. 3535 PIEDMONT ROAD BUILDING 14- 14TH FLOOR

ATLANTA GA 30305

Facility Id: 54634

Call Sign: KDHL

License File Number: BZ-20010227ACB

Son Nguyen

Supervisory Engineer Audio Services Division

Mass Media Bureau

Grant Date: JUL 312001 This license expires 3:00 a.m.

local time, April 01, 2005.

Subject to the provisions of the Communications Act of 1934, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this license, the licensee is hereby authorized to use and operate the radio transmitting apparatus herein described.

This license is issued on the licensee's representation that the statements contained in 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. 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.

Hours of Operation: Unlimited

Average hours of sunrise and sunset: Local Standard Time (Non-Advanced)

Jan.	7:45	AM	5:00	PM	Jul.	4:45	AM	8:00	PM
Feb.	7:15	AM	5:45	PM	Aug.	5:15	AM	7:15	PM
Mar.	6:30	AM	6:15	PM	Sep.	5:45	AM	6:30	PM
Apr.	5:30	AM	7:00	PM	Oct.	6:30	AM	5:30	PM
May	4:45	AM	7:30	PM	Nov.	7:15	AM	4:45	PM
Jun.	4:30	AM	8:00	PM	Dec.	7:45	AM	4:30	PM

Callsign: KDHL License No.: BZ-20010227ACB

Name of Licensee: CUMULUS LICENSING CORP.

Station Location: FARIBAULT, MN

Frequency (kHz): 920

Station Class: B

## Antenna Coordinates:

Day

Latitude: N 44 Deg 15 Min 47 Sec Longitude: 93 Deg 16 Min 29 Sec

Night

Latitude: N 44 Deg 15 Min 47 Sec Longitude: W 93 Deg 16 Min 29 Sec

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

Nominal Power (kW): Day: 5.0

Night: 5.0

Antenna Input Power (kW): Day:5.4

Night: 5.4

Antenna Mode:

Day: DA

Night: DA

(DA=Directional Antenna, ND=Non-directional Antenna; CH=Critical Hours)

Current (amperes):

Day: 10.4

Night: 10.4

Resistance (ohms):

Day: 50

Night: 50

## Antenna Registration Number(s):

#### Day:

Tower No. ASRN 1 1024055

3

2 1024051

1024050

1024049

#### Night:

Tower No. **ASRN** 

> 1 1024052

> 2 1024051

3 1024054

4 1024050

5 1024053

6 1024055 Callsign: KDHL License No.: BZ-20010227ACB

DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

Theoretical RMS (mV/m/km): Day: 643.74 Night: 645.35

Standard RMS (mV/m/km):

Augmented RMS (mV/m/km): Day:708.94 Night:713.06

Q Factor: Day: Night:

Theoretical Parameters:

Day Directional Antenna:

Tower No.	Field Ratio	Phasing (Deg.)	Spacing (Deg.)	Orientation (Deg.)	Tower Ref Switch *	
1	1.1340	119.500	0.0000	0.000	0	84.2
2	1.7700	-74.400	90.0000	217.000	0	84.2
3	2.0660	80.600	90.0000	217.000	1	84.2
4	0.8000	-119.500	90.0000	217.000	1	84.2

<sup>\*</sup> Tower Reference Switchi"

## Augmentation Parameters:

Aug No.	Central Azimuth (Deg. T)	Span (Deg.)	Radiation at Central Azimuth (mV/m @ 1 km)
1	5.0	64.0	1082.81
2	37.0	64.0	1583.80
3	70.0	50.0	1054.43
4	95.0	14.0	321.87
5	102.0	10.0	256.69
6	131.0	58.0	407.97
7	160.0	58.0	450.62
8	190.0	24.0	136.79
9	197.0	10.0	90.93
10	202.0	20.0	112.33
11	230.0	20.0	101.39
12	235.0	20.0	107.83
13	250.0	10.0	209.21
14	260.0	10.0	426.48
15	265.0	10.0	426.48
16	276.0	18.0	450.62
17	285.0	18.0	433.22
18	297.0	24.0	411.33
19	307.5	15.0	389.46
20	334.0	10.0	249.45
21	337.0	12.0	288.07

<sup>0 =</sup> Spacing and orientation from reference tower

<sup>1 =</sup> Spacing and orientation from previous tower

## Theoretical Parameters:

# Night Directional Antenna:

Tower No.	Field Ratio Phasi (Deg.		Orientation (Deg.)	Tower Ref Switch *	Height (Deg.)
1	1.0000 -4.	700 0.0000	0.000	0	84.2
2	1.5010 -154.	800 90.0000	37.000	0	84.2
3	1.8620 146.	500 275.6000	94.000	1	84.2
4	1.1510 63.	300 180.0000	37.000	0	84.2
5	1.2410 -68.	500 260.7000	94.400	0	84.2
6	1.4290 4.	700 403.0000	72.000	0	84.2

<sup>\*</sup> Tower Reference Switchi"

## Augmentation Parameters:

Aug No.	Central Azimuth (Deg. T)	Span (Deg.)	Radiation at Central Azimuth (mV/m @ 1 km)
1	0.0	10.0	1448.41
2	5.0	10.0	1673.72
3	13.0	10.0	1878.10
4	21.0	32.0	2033.79
5	60.0	12.0	442.57
6	66.0	12.0	405.55
7	75.0	14.0	531.08
8	82.0	14.0	674.32
9	94.0	10.0	457.05
10	99.0	10.0	405.55
11	104.0	10.0	346.01
12	109.0	10.0	280.03
13	117.0	16.0	180.25
14	127.0	36.0	152.89
15	160.0	42.0	439.93
16	181.0	28.0	154.01
17	195.0	14.0	56.33
18	202.0	14.0	64.37
19	210.0	14.0	72.42
20	217.0	14.0	99.78
21	248.0	62.0	83.69
22	285.0	70.0	473.05
23	309.0	18.0	254.28
24	318.0	18.0	172.20

<sup>0</sup> = Spacing and orientation from reference tower

<sup>1 =</sup> Spacing and orientation from previous tower

## Augmentation Parameters:

Aug No.	Central Azimuth (Deg. T)	Span (Deg.)	Radiation at Central Azimuth (mV/m @ 1 km)
25	327.0	14.0	201.17
26	336.0	10.0	144.84
27	340.0	10.0	160.93

# Day Directional Operation:

	Phase (Deg.)	Antenna Monitor Sample Current Ratio	
1	155.5	0.18	0.273
2	0	1	1
3	-149.5	0.835	0.945
7	41.5	0.643	0.709

# Night Directional Operation:

Twr. No.	Phase (Deg.)	Antenna Monitor Sample Current Ratio	Antenna Base Current Ratio
1	158.5	0.345	0.421
2	0	1	1
3	-143.3	0.602	0737
4	88.7	0.877	0.947
5	-61.5	1.33	1.421
6	158.5	1.091	1.105

Antenna Monitor: POTOMAC INSTRUMENTS 1901

#### Monitoring Points:

### Day Operation:

Radial (Deg. T)	Distance From Transmitter (kM)	
102	4.41	66.2
202	6.44	18.9
217	6.05	24.6
297	4.7	73.8

### Night Operation:

Radial (Deg. T)	Distance F	rom Transmitter (kM)	Maximum	Field Strength (mV/m)
66		5.34		72.2
127		5.41		23.3
202		6.41		12.7
248		4.36		23.9
327		7.1		27.1

## Special operating conditions or restrictions:

- The permittee/licensee 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.
- Ground system consists of 120 equally spaced buried copper radials about the base of each tower 81.4 m in length except where intersecting radials are shortened and bonded, plus 120 interspersed radials 15.2 m in length about the base of each tower.
- Monitor point on 127 degrees: From the KDHL transmitter site, proceed North on Highway #3 for 0.85 miles to Glynview Terrace. Turn right. Proceed for 3.0 miles South West, to the railroad tracks. Continue on Glynview East for 1 mile to Dahl Road. Turn right south. Drive South on Dahl Road a distance of 0.4 miles. Follow the unpaved road to the left East. The point is located 200 feet East of Dahl Road.
- Monitor point on 202 degrees: Starting from the driveway entrance at the transmitter site proceed south on State Highway #3 for 2.7 miles to crossing. Turn right heading west and proceed 1.0 miles passing over the Federal four lane highway #35. Turn left and proceed 1.0 miles south. Turn right at this road and travel 0.8 miles to monitoring point on the road.
- Monitor point on 217 degrees: Starting from the driveway entrance at the transmitter site, proceed south on State Highway #3 for 2.7 miles. Turn right heading west and proceed 2.5 miles to the crossroad. Turn left heading south and proceed for 0.33 miles. Monitoring point is located on the road.

Special operating conditions or restrictions:

- Monitor point on 248 degrees: From the KDHL transmitter site, proceed South on Highway #3 for 0.67 miles to the intersection of crossroads. Turn right West for a distance of 2.5 miles to Canby Road. Turn left South, for distance of 0.5 miles. Turn right on a farm road West for a distance of 300 feet. The point is in the field near the fence line.
  - Monitor point on 297 degrees: From the KDHL transmitter site , proceed South on Highway #3 for 0.67 miles to the intersection of crossroads. Turn right West for a distance of 2.5 miles until reaching the intersection of Canby Road and Highway #60. Turn left South West on Highway #60 for a distance of 0.27 miles. The point is at the mailbox in the driveway leading to the house and farm.
- Monitor point at 327 degrees: Starting from the driveway entrance at the KDHL transmitter site, proceed south on State Highway #3 for 0.67 miles to crossroad intersection. Turn right heading west and travel 1.5 miles. Turn right heading north and proceed 2.9 miles to the road crossing the dam by the old flour mill. From the mill proceed 0.75 miles on the blacktop to the Y junction. At this junction take the right hand fork and proceed in a northwest direction for 0.6 miles. At this point turn right off the blacktop onto the gravel road. Heading north proceed for 0.7 miles to the entrance gate on the eastward side of the road. Enter pasture and proceed eastward 150' to monitoring point (approximately halfway from gate to nearest tree to the east.
- 8 Directions for all monitor points start from the KDHL transmitter site. All monitor directions are from True North.
- Day towers # 1, 2, 3, and 4 for theoretical parameters, tower registration and operating parameters correspond to physical tower SW#1, WC#2,NW#3, and N#7.
  - Night towers # 1,2,3,4,5, and 6 for theoretical parameters, tower registration correspond to physical tower SW#1,WC#2,EC#5, NW#3, SE#4 and NE#6. Operating parameters for tower #1,2,3,4,5 and 6 correspond to SW#1, WC#2, NW#3, SE#4, EC#5, and NE#6.
- Monitoring point at 66 degrees: Starting at the driveway entrance at the KDHL transmitter site, proceed north on State Highway #3 for 0.85 miles to the south city limits of Faribault. Take the blacktop going southeast for 0.90 miles (crossing the railroad track) then turn left onto the gravel road. From this point travel east on the gravel road for 2.2 miles. Turn left heading north and travel this jogging road for 1.1 miles. Monitoring point is on the road.
- Monitor point on 102 degrees: Starting from the driveway entrance at the KDHL transmitter site proceed north on State Highway #3 0.85 miles to the south city limit of Faribault. Take the blacktop going southeast for 0.90 miles (crossing the railroad track) then turn left onto gravel road. From this point travel east on the gravel road 1.85 miles. Turn right heading south and travel 1.0 mile to the country school. Walk 150' west to the basketball hoop where the monitoring point is located.

\*\*\* END OF AUTHORIZATION \*\*\*