

## SECTION III-A AM Engineering

## TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

## TECH BOX

1. Frequency: 740 kHz
2. Class: ☐ A ☒ B ☐ C ☐ D
3. Hours of Operation: ☒ Unlimited ☐ Limited ☐ Daytime ☐ Share ☐ Specified Hours: \_\_\_\_\_
4. Daytime Operation: ☒ Yes ☐ No
- a. Power: 50 kW
- b. Antenna Location Coordinates: (NAD 27)
- 46 ° 58 ' 29 " ☒ N ☐ S Latitude
- 96 ° 30 ' 12 " ☐ E ☒ W Longitude
- c. Nondirectional: ☐ Yes ☒ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical \_\_\_\_\_ mV/m per kW at 1 km

Tower	
Overall height above ground (include obstruction lighting) (meters)	
Antenna structure registration	<input type="checkbox"/> Number Notification filed with <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	
Electrical height of radiator (degrees)	
Top-Loaded/Sectionalized apparent height (degrees)	
A	
B	
C	
D	

# TECH BOX - DAYTIME OPERATION

## d. Directional:

If "Yes," complete the following items. If additional space is needed, please provide

☒ Yes ☐ No

Exhibit No.  
301-D-6

Theoretical 2239.3 mV/m at 1 km  
Standard RMS: 2353.2 mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)				
Antenna structure registration	<input type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)				
Electrical height of radiator (degrees)				
Field ratio				
Phase (degrees)				
Spacing (degrees)				
Tower orientation (degrees)				
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A				
B				
C				
D				

☐ Yes ☒ No

## Augmented:

If "Yes," complete the following:

Augmented RMS: \_\_\_\_\_ mV/m at 1 km  
Azimuth Span Augmentation radiation


[EXHIBIT 301-D -6] Tower data exhibit for 6-tower directional array.

Towers	1	2	3	4	5	6
Overall height above ground (include obstruction lighting) (meters)	93.3 (pending)	93.3 (pending)	93.3 (pending)	93.3 (pending)	93.3 (pending)	93.3 (pending)
Antenna structure registration	<input checked="" type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	91.4	91.4	91.4	91.4	91.4	91.4
Electrical height of radiator (degrees)	81.3°	81.3°	81.3°	81.3°	81.3°	81.3°
Field ratio	0.529	0.766	1.000	0.424	0.640	0.282
Phase (degrees)	-70.5°	+171.2°	±0.0	-176.1°	+20.0°	+46.9°
Spacing (degrees)	0.0 °	119.8°	235.7°	289.2°	178.4°	84.0°
Tower orientation (degrees)	0.0°	26.9°	19.6°	31.5°	43.2°	76.3°
Tower reference switch	0	0	0	0	0	0
Top-Loaded/Sectionalized apparent height (degrees)						
A	81.3°	81.3°	81.3°	81.3°	81.3°	81.3°
B	0	0	0	0	0	0
C	0	0	0	0	0	0
D	0	0	0	0	0	0

☒ Yes ☐ No

**5. Nighttime Operation:**

a. Power:  $\frac{1.0}{\text{}} \text{ kW}$

b. Antenna Location Coordinates: (NAD 27)

$\frac{46}{96}^{\circ} \frac{58}{30}' \frac{29}{12}''$  ☒ N ☐ S Latitude  
☐ E ☒ W Longitude

c. **Nondirectional:**

☐ Yes ☒ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical \_\_\_\_\_ mV/m per kW at 1 km

Tower	
Overall height above ground (include obstruction lighting) (meters)	
Antenna structure registration	<div style="text-align: right; margin-bottom: 10px;">_____ Number</div> <input type="checkbox"/> Notification filed with <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	
Electrical height of radiator (degrees)	
Top-Loaded/Sectionalized apparent height (degrees)	
A	
B	
C	
D	

# TECH BOX - NIGHTTIME OPERATION

## d. Directional:

☒ Yes ☐ No

If "Yes," complete the following items. If additional space is needed, please provide

Exhibit No.  
301-N-6

Theoretical 297.81 mV/m at 1 km  
Standard RMS: 312.90 mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)				
Antenna structure registration	<input type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable	<input type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable	<input type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable	<input type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)				
Electrical height of radiator (degrees)				
Field ratio				
Phase (degrees)				
Spacing (degrees)				
Tower orientation (degrees)				
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A				
B				
C				
D				

☐ Yes ☒ No

## Augmented:

If "Yes," complete the following:

Augmented RMS: \_\_\_\_\_ mV/m at 1 km  
Azimuth Span Augmentation radiation


[EXHIBIT 301-N-6] Tower data exhibit for 6-tower directional array.

Towers	1	2	3	4	5	6
Overall height above ground (include obstruction lighting) (meters)	93.3	93.3	93.3	93.3	93.3	93.3
	(pending)	(pending)	(pending)	(pending)	(pending)	(pending)
Antenna structure registration	<input checked="" type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable	<input checked="" type="checkbox"/> Number Notification filed  <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	91.4	91.4	91.4	91.4	91.4	91.4
Electrical height of radiator (degrees)	81.3°	81.3°	81.3°	81.3°	81.3°	81.3°
Field ratio	1.000	0.480	1.543	1.550	0.786	0.930
Phase (degrees)	±0.0°	-86.0	+70.7°	+178.4°	+4.3°	+126.1°
Spacing (degrees)	0.0°	119.8°	235.7°	289.2°	178.4°	84.0°
Tower orientation (degrees)	0.0°	26.9°	19.6°	31.5°	43.2°	76.3°
Tower reference switch	0	0	0	0	0	0
Top-Loaded/Sectionalized apparent height (degrees)						
A	81.3°	81.3°	81.3°	81.3°	81.3°	81.3°
B	0	0	0	0	0	0
C	0	0	0	0	0	0
D	0	0	0	0	0	0

## 6. Critical Hours Operation:

☒ Yes ☐ Noa. Power: 8.8 kW

b. Antenna Location Coordinates: (NAD 27)

46 ° 58 ' 29 " ☒ N ☐ S Latitude  
96 ° 30 ' 12 " ☐ E ☒ W Longitude

c. Nondirectional:

☐ Yes ☒ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No. 

Theoretical \_\_\_\_\_ mV/m per kW at 1 km

Tower	
Overall height above ground (include obstruction lighting) (meters)	
Antenna structure registration	<div style="text-align: center;">Number</div> <input type="checkbox"/> Notification filed with <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	
Electrical height of radiator (degrees)	
Top-Loaded/Sectionalized apparent height (meters)	
A	
B	
C	
D	

# TECH BOX - CRITICAL HOURS OPERATION

## d. Directional:

☒ Yes ☐ No

If "Yes," complete the following items. If additional space is needed, please provide

Exhibit No.  
301-CH-6

Theoretical 939.44 mV/m at 1 km

Standard RMS: 987.22 mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)				
Antenna structure registration	<div>Number</div> <input type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable	<div>Number</div> <input type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable	<div>Number</div> <input type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable	<div>Number</div> <input type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)				
Electrical height of radiator (degrees)				
Field ratio				
Phase (degrees)				
Spacing (degrees)				
Tower orientation (degrees)				
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A				
B				
C				
D				

## Augmented:

☐ Yes ☒ No

If "Yes," complete the following:

Augmented RMS: \_\_\_\_\_ mV/m at 1 km  
Azimuth Span Augmentation radiation




[EXHIBIT 301-CH-6] Tower data exhibit for 6-tower directional array.

Towers	1	2	3	4	5	6
Overall height above ground (include obstruction lighting) (meters)	93.3	93.3	93.3	93.3	93.3	93.3
Antenna structure registration	(pending) Number <input checked="" type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable	(pending) Number <input checked="" type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable	(pending) Number <input checked="" type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable	(pending) Number <input checked="" type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable	(pending) Number <input checked="" type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable	(pending) Number <input checked="" type="checkbox"/> Notification filed <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	91.4	91.4	91.4	91.4	91.4	91.4
Electrical height of radiator (degrees)	81.3°	81.3°	81.3°	81.3°	81.3°	81.3°
Field ratio	0.529	0.766	1.000	0.424	0.640	0.282
Phase (degrees)	-70.5°	+171.2°	±0.0°	-176.1°	+20.0°	+46.9°
Spacing (degrees)	0.0°	119.8°	235.7°	289.2°	178.4°	84.0°
Tower orientation (degrees)	0.0°	26.9°	19.6°	31.5°	43.2°	76.3°
Tower reference switch	0	0	0	0	0	0
Top-Loaded/Sectionalized apparent height (degrees)						
A	81.3°	81.3°	81.3°	81.3°	81.3°	81.3°
B	0	0	0	0	0	0
C	0	0	0	0	0	0
D	0	0	0	0	0	0

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

## CERTIFICATION

7. **Broadcast Facility.** The proposed facility complies with the engineering standards and assignment requirements of 47 C.F.R. Sections 73.24(e), 73.24(g), 73.33, 73.45, 73.150, 73.152, 73.160, 73.182(a)-(i), 73.186, 73.189, 73.1650. **Exhibit Required.** ☒ Yes ☐ No See Explanation in Exhibit No. Exhibit No. FIGS: 1,2, 3,4,5,6,7 & ENG.
8. **Community Coverage.** The proposed facility complies with community coverage requirements of 47 C.F.R. Section 73.24(i). ☒ Yes ☐ No See Explanation in Exhibit No.
9. **Main Studio Location.** The proposed main studio location complies with requirements of 47 C.F.R. Section 73.1125. ☒ Yes ☐ No See Explanation in Exhibit No.
10. **Interference.** The proposed facility complies with all of the following applicable rule sections. Check all those that apply. An exhibit is required for each applicable section. ☒ Yes ☐ No See Explanation in Exhibit No.
- Groundwave.**
- a. ☒ 47 C.F.R. Section 73.37 Exhibit No. FIGS: 8,9, 10 & ENG.
- Skywave.**
- b. ☒ 47 C.F.R. Section 73.182. Exhibit No. FIGS: 11-21 & ENG (as amended)
- Critical Hours.**
- c. ☒ 47 C.F.R. Section 73.187. Exhibit No. FIGS: 8C, 8D\*, 9C, 9D, 10A, 10F & ENG (\* As amended)
11. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine compliance through the use of the RF worksheets in Appendix A, an Exhibit is required. ☒ Yes ☐ No See Explanation in Exhibit No. ENG.

By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

PREPARER'S CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.