

**FCC FORM 442 - FEDERAL COMMUNICATIONS COMMISSION  
APPLICATION FOR NEW OR MODIFIED RADIO STATION UNDER  
PART 5 OF FCC RULES - EXPERIMENTAL RADIO SERVICE (OTHER  
THAN BROADCAST)**

**Approved by  
OMB  
3060 - 0065  
Expires  
09/30/98**

**Applicant's Name (company):** American Radio Relay League, Inc.      **File No.:** 0099-EX-ML-2008

### **Mailing Address**

**Attention:** Christopher D. Imlay  
**Street Address:** 225 Main Street  
**P.O. Box:**  
**City:** Newington  
**State:** CT  
**Country:**  
**Zip Code:** 06111  
**E-Mail Address:** W3KD@ARRL.ORG

### **Application Purpose**

**Application is for:** MODIFICATION OF  
LICENSE

### **For Modification indicate below**

**File No.:** 0048-EX-ML-2008    **Callsign:**  
WD2XSH

### **Government Contract**

**Is this authorization to be used for fulfilling the requirement of a government contract with an agency of the United States Government? If "YES", include as an exhibit a narrative statement describing the government project, agency and contract number.** No

### **Foreign Government Use**

**Is this authorization to be used for the exclusive purpose of developing radio equipment for export to be employed by stations under the jurisdiction of a foreign government? If "YES", include the contract number and the name of the foreign government concerned as an exhibit.** No

### **Research Project**

**Is this authorization to be used for providing communications essential to a research project? (The radio communication is not the objective of the research project)? If "YES", include as an exhibit the following information:**

- a. A description of the nature of the research project being conducted.
- b. A showing that the communications facilities requested are necessary for the research project involved.
- c. A showing that existing communications facilities are inadequate.

No

## Exhibit Information

If all the answers to Items 4, 5, 6 are "NO", include as an exhibit a narrative statement describing in detail the following items:

- a. The complete program of research and experimentation proposed including description of equipment and theory of operation.
- b. The specific objectives sought to be accomplished.
- c. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along line not already investigated.

## Estimated Duration

Give an estimate of the length of time that will be required to complete the program of experimentation proposed in this application: 60 Months

## Environmental Impact

Would a commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact? If "YES", include as an exhibit an Environmental Assessment as required by Section 1.1311. No

## Manufacturer

List below transmitting equipment to be installed (if experimental, so state) if additional rows are required, please submit equipment list as an exhibit :

Manufacturer	Model Number	No. Of Units	Experimental
Various	various	40	No

## Station ID

Is the equipment listed in Item 10 capable of station identification pursuant to Section 5.115?  
Yes

## Applicant Type

Applicant is:  
Association

## Foreign Government

Is applicant a foreign government or a representative of a foreign government?  
No

## License Denied or Revoked

Has applicant or any party to this application had any FCC station license or permit revoked or any application for permit, license or renewal denied by this Commission?  
If "YES", include as an exhibit a statement giving call sign of license or permit revoked and relate circumstances. No

## Owner and Operator

**Will applicant be owner and operator of the station?**

No

## Contact Information

**Give the following information of person who can best handle inquiries pertaining to this application:**

**First Name:** Christopher

**Last Name:** Imlay

**Title:** General Counsel

**Phone Number:** 3013845525

**E-Mail Address:** W3KD@ARRL.ORG

## Drug Abuse Question

**APPLICANT ANTI-DRUG ABUSE CERTIFICATION:** By checking "YES", the individual applicant certifies that he or she is eligible for this license. This requires that he or she is not subject to a denial of federal benefits, including FCC benefits, as a result of a drug offense conviction pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862. A non-individual applicant, e.g., corporation, partnership or other unincorporated association, certifies that no party to the application is subject to a denial of federal benefits, pursuant to that section. For definition of a "party" for these purposes, see 47CFR 1.2002(b). Yes

## Certification

**THE APPLICANT CERTIFIES THAT:**

- a. Copies of the FCC Rule Parts 2 and 5 are on hand; and
- b. Adequate financial appropriations have been made to carry on the program of experimentation which will be conducted by qualified personnel; and
- c. All operations will be on an experimental basis in accordance with Part 5 and other applicable rules, and will be conducted in such a manner and at such a time as to preclude harmful interference to any authorized station; and
- d. Grant of the authorization requested herein will not be construed as a finding on the part of the Commission:
  1. that the frequencies and other technical parameters specified in the authorization are the best suited for the proposed program of experimentation, and
  2. that the applicant will be authorized to operate on any basis other than experimental, and
  3. that the Commission is obligated by the results of the experimental program to make provision in its rules including its table of frequency allocations for applicant's type of operation on a regularly licensed basis.

**THE APPLICANT FURTHER CERTIFIES THAT:**

- e. All the statements in the application and attached exhibits are true, complete and correct to the best of the applicant's knowledge; and
- f. The applicant is willing to finance and conduct the experimental program with full knowledge and understanding of the above limitations; and
- g. The applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the USA.

**Name of Applicant:** American Radio Relay League, Inc.

**Signature (Authorized person filing form):** Christopher D. Imlay

**Signature Date (Authorized person filing form):** 08/22/2008

**Title of Person Signing Application:** General Counsel

**Classification:** Office of applicant corporation or association

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(A)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).**

**NOTIFICATION TO INDIVIDUALS UNDER PRIVACY ACT OF 1974 AND THE PAPERWORK REDUCTION ACT OF 1980**

Information requested through this form is authorized by the Communications Act of 1934, as amended, and specified by Section 308 therein. The information will be used by Federal Communications Commission staff to determine eligibility for issuing authorizations in the use of the frequency spectrum and to effect the provisions of regulatory responsibilities rendered by the Commission by the Act. Information requested by this form will be available to the public unless otherwise requested pursuant to 47 CFR 0.459 of the FCC Rules and Regulations. Your response is required to obtain this authorization.

Public reporting burden for this collection of information is estimated to average four (4) hours 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. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0065), Washington DC 20554. DO NOT send completed applications to this address. Individuals are not required to respond to this collection unless it displays a currently valid OMD control number.

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.

**Station Location**

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Jamestown	Rhode Island	North 41 27 30	West 71 23 45	within 50 km of specified fixed station location	761 Beavertail Road		1.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 18.00

(b) Elevation of ground at antenna site above mean sea level in meters: 23.00

(c) Distance to nearest aircraft landing area in kilometers: 13.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
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New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	
<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Hammond	Louisiana	North 30 27 0	West 90 31 0		40406 Edgar Traylor Road		1.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 15.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 8.00

**(c) Distance to nearest aircraft landing area in kilometers:** 18.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** existing antenna

<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>

New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	
<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Bow	New Hampshire	North 43 7 30	West 71 30 59	within 50 km of specified fixed station location	9 Dean Avenue	50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 20.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 145.00

**(c) Distance to nearest aircraft landing area in kilometers:** 11.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** existing antenna

<b>Action Frequency</b>	<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P	62H0F1B	
<b>Action Frequency</b>	<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P	62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Long Beach	Mississippi	North 30 21 42	West 89 8 10	within 50 km of specified fixed station location	1157 East Old Pass Road		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 20.00

(b) Elevation of ground at antenna site above mean sea level in meters: 7.00

(c) Distance to nearest aircraft landing area in kilometers: 10.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal

New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	
<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Natchitoches	Louisiana	North 31 46 37	West 93 11 1	within 50 km of specified fixed station location	641 Sisson Road		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 23.00

(b) Elevation of ground at antenna site above mean sea level in meters: 55.00

(c) Distance to nearest aircraft landing area in kilometers: 8.10

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: trees of comparable height

New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
<b>Action Frequency</b>		<b>Station Class</b>	<b>Output Power/ERP</b>	<b>Mean Peak</b>	<b>Frequency Tolerance (+/-)</b>	<b>Emission Designator</b>	<b>Modulating Signal</b>
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	



Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 McLean	Virginia	North 38 55 58	West 77 10 17	within 50 km of specified fixed station location	6915 Chelsea Road		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 15.00

(b) Elevation of ground at antenna site above mean sea level in meters: 104.00

(c) Distance to nearest aircraft landing area in kilometers: 16.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	FX	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	FX	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	FX	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
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New 495.00000000-510.00000000 kHz FX N/A 20.000000 W P 150HA1A 50 baud

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Jamestown	Rhode Island	North 41 29 47	West 71 22 50	within 50 km of specified fixed station location	14 Washington Street		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 17.00

(b) Elevation of ground at antenna site above mean sea level in meters: 11.00

(c) Distance to nearest aircraft landing area in kilometers: 24.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Stanfield	North Carolina	North 35 15 21	West 80 23 0	within 50 km of specified fixed station location	16164 Pless Mill Road		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 33.00

(b) Elevation of ground at antenna site above mean sea level in meters: 67.00

(c) Distance to nearest aircraft landing area in kilometers: 21.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
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0 Nederland Colorado North 39 West 105 within 50 km of specified fixed station location 536 Hurricane Hill Drive 50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 18.00

(b) Elevation of ground at antenna site above mean sea level in meters: 2591.00

(c) Distance to nearest aircraft landing area in kilometers: 32.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Verndale	Minnesota	North 46 36 42	West 94 48 3	within 50 km of fixed station location	26699-271st Street		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 17.00

(b) Elevation of ground at antenna site above mean sea level in meters: 467.00

(c) Distance to nearest aircraft landing area in kilometers: 30.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Colchester	Vermont	North 44 30 20	West 73 8 40	within 50 km of specified fixed station location	77 Vermont Avenue		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 13.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 37.00

**(c) Distance to nearest aircraft landing area in kilometers:** 5.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Roland	Arkansas	North 34 49 51	West 92 31 43	within 50 km of fixed station location	8101 Barrett Road		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** No

**(a) Overall height above ground to tip of antenna in meters:**

**(b) Elevation of ground at antenna site above mean sea level in meters:**

**(c) Distance to nearest aircraft landing area in kilometers:**

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:**

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
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New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
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Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
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New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
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Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
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New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	
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Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
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New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud
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	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
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0	St. Francis	Minnesota	North 45 22 54	West 93 21 41	within 50 km of specified fixed station location	3740 227th Ave., NW		50.00
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**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 15.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 280.00

**(c) Distance to nearest aircraft landing area in kilometers:** 24.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Marshfield	Massachusetts	North 42 4 46	West 70 42 21	within 50 km of specified fixed station location	11 Walnut Street		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 21.00

(b) Elevation of ground at antenna site above mean sea level in meters: 21.00

(c) Distance to nearest aircraft landing area in kilometers: 3.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Green Harbor	Massachusetts	North 42 4 18	West 70 39 16	within 50 km of specified fixed station location	19 Pearl Street		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 18.00

(b) Elevation of ground at antenna site above mean sea level in meters: 6.00

(c) Distance to nearest aircraft landing area in kilometers: 0.32

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Batavia	Illinois	North 41 50 48	West 88 19 8	within 50 km of specified fixed station location	314 S. Harrison Street		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 9.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 229.00

**(c) Distance to nearest aircraft landing area in kilometers:** 13.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Cottage Grove	Oregon	North 43 42 14	West 123 2 19	within 50 km of specified fixed station location	32857 Fox Lane		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 43.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 307.00

**(c) Distance to nearest aircraft landing area in kilometers:** 13.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Buffalo	New York	North 42 0 3	West 78 47 34	within 50 km of specified fixed station location	State University of NY at Buffalo, Natural Sci/ Mat		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 42.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 190.00

**(c) Distance to nearest aircraft landing area in kilometers:** 14.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** University Buildings, same height.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Wayland	Massachusetts	North 42 21 55	West 71 20 8	within 50 km of specified fixed station location	157 Plain Road		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 18.00

(b) Elevation of ground at antenna site above mean sea level in meters: 40.00

(c) Distance to nearest aircraft landing area in kilometers: 12.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: existing antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	50 baud

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Hilo	Hawaii	North 19 38 58	West 155 7 16	within 50 km of specified fixed station location	2058 Ainaola Drive		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 15.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 310.00

**(c) Distance to nearest aircraft landing area in kilometers:** 9.32

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** house

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	El Cerrito	California	North 37 54 2	West 122 18 22	within 50 km of specified fixed station location	3259 Santa Clara Avenue #1		50.00



**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 15.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 3.00

**(c) Distance to nearest aircraft landing area in kilometers:** 8.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** buildings, hills, other towers

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Nikiski	Alaska	North 60 40 5	West 151 18 51	within 50 km of specified fixed station location	47250 Autumn Road		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 15.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 40.00

**(c) Distance to nearest aircraft landing area in kilometers:** 18.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** house and shed

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Moscow	Idaho	North 46 44 9	West 116 59 55	within 50 km of fixed station location	226 North Washington Street		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 26.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 827.00

**(c) Distance to nearest aircraft landing area in kilometers:** 11.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** house

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Elbe	Washington	North 46 45 45	West 122 10 18	within 50 km of specified fixed station location	20409 SR 706		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 30.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 429.00

**(c) Distance to nearest aircraft landing area in kilometers:** 60.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** house

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Stehekin	Washington	North 48 20 48	West 120 43 13	within 50 kilometers of specified fixed station location	125 Company Creek Road		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 30.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 417.00

**(c) Distance to nearest aircraft landing area in kilometers:** 1.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** nearby trees are slightly taller than antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 North Pole	Alaska	North 64 46 52	West 147 22 6	within 50 km of specified fixed station location	3763 Lyle Avenue		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 18.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 150.00

**(c) Distance to nearest aircraft landing area in kilometers:** 29.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** house same height as antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Wasilla	Alaska	North 61 35 43	West 149 24 32	within 50 km of specified fixed station location	4590 East Birch Drive		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 15.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 100.00

**(c) Distance to nearest aircraft landing area in kilometers:** 17.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** tree tops same height as antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Conneaut	Ohio	North 41 50 45	West 80 36 41	within 50 km of specified fixed station location	4398 Reger Road		50.00

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 9.00

(b) Elevation of ground at antenna site above mean sea level in meters: 261.50

(c) Distance to nearest aircraft landing area in kilometers: 10.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: house, trees

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Eden Prairie	Minnesota	North 44 52 33	West 93 28 4	within 50 km of specified fixed station location	7003 Woodland Drive		50.00



**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 30.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 300.00

**(c) Distance to nearest aircraft landing area in kilometers:** 27.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** house

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Forest	Virginia	North 37 23 39	West 79 14 16	within 50 km of specified fixed station location	1704 Cottontown Road		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 23.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 275.00

**(c) Distance to nearest aircraft landing area in kilometers:** 8.80

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** trees used for support are slightly higher

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Gays Mills	Wisconsin	North 43 17 40	West 90 52 1	within 50 km of specified fixed station location	44483 Vinegar Ridge Drive		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 10.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 380.00

**(c) Distance to nearest aircraft landing area in kilometers:** 13.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** nearby hills 30 meters taller than antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Boone	Iowa	North 42 2 25	West 93 58 21	within 50 km of specified fixed station location	Jonquil Lane		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 20.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 350.00

**(c) Distance to nearest aircraft landing area in kilometers:** 16.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** trees about 15 meters in height

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Indianola	Iowa	North 41 26 16	West 93 34 6	within 50 km of specified fixed station location	12500 G24 Highway		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 15.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 260.00

**(c) Distance to nearest aircraft landing area in kilometers:** 11.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** nearby trees 5 to 10 meters taller than antenna

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Elk Point	South Dakota	North 42 45 51	West 96 41 55	within 50 km of specified fixed station location	47553 319th Street		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 7.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 432.00

**(c) Distance to nearest aircraft landing area in kilometers:** 16.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** trees taller than antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Bethany	Oklahoma	North 35 30 41	West 97 39 45	within 50 km of specified fixed station location	3830 North Eagle Lane		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 7.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 430.00

**(c) Distance to nearest aircraft landing area in kilometers:** 3.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** trees taller than antenna

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Groton	Massachusetts	North 42 36 14	West 71 32 31	within 50 km of specified fixed station location	PO Box 363		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 17.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 76.00

**(c) Distance to nearest aircraft landing area in kilometers:** 10.50

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** proposes existing amateur radio antenna; trees are 5-7 meters higher than antenna.

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	
Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Charlestown	New Hampshire	North 43 14 19	West 72 25 30	within 50 km of specified fixed station location	19 Fairbrother Avenue		50.00



Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 33.00

(b) Elevation of ground at antenna site above mean sea level in meters: 110.00

(c) Distance to nearest aircraft landing area in kilometers: 13.00

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: houses, trees

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 Pelham	New Hampshire	North 42 44 58	West 71 21 47	within 50 km of specified fixed station location	169 Jeremy Hill Road		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 65.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 208.00

**(c) Distance to nearest aircraft landing area in kilometers:** 25.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** existing tower 60 meters high. Houses, trees nearby

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	New Bedford	Massachusetts	North 41 40 16	West 70 56 39	within 50 km of specified fixed station location	376 Nash Road		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 10.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 8.00

**(c) Distance to nearest aircraft landing area in kilometers:** 3.00

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** nearby buildings approximately same height

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	Stow	Massachusetts	North 42 24 24	West 71 29 50	within 50 km of specified fixed station location	333 Sudbury Road		50.00

**Datum:** NAD 83

**Is a directional antenna (other than radar) used?** No

**Exhibit submitted:** No

**(a) Width of beam in degrees at the half-power point:**

**(b) Orientation in horizontal plane:**

**(c) Orientation in vertical plane:**

**Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building?** Yes

**(a) Overall height above ground to tip of antenna in meters:** 10.00

**(b) Elevation of ground at antenna site above mean sea level in meters:** 62.00

**(c) Distance to nearest aircraft landing area in kilometers:** 7.50

**(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:** houses, trees nearby

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		150HA1A	
Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0F1B	
Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0G1D	
Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New 495.00000000-510.00000000 kHz	MO	N/A 20.000000 W	P		62H0J2B	