

Consolidated Technical Statement

prepared December 2023 for

VSS Catholic Communications, Inc.

KETW(FM) Ogallala, Nebraska



CAVELL
MERTZ
& Associates, Inc.

a division of



Capitol Airspace Group

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Introduction

VSS Catholic Communications, Inc. (“*VSS Catholic*”), has been granted a Construction Permit (“CP”) (file number 0000216948) as a Singleton from the 2021 NCE Filing Window. Facility ID 768047 and the call sign KETW has been assigned to this facility. The instant application is being filed to request a move to a different tower nearby. In particular, *VSS Catholic* proposes to use a registered tower (ASR Number 1056379) with coordinates of 41° 10’ 37.0”N Latitude, and 101° 48’ 28.0”W Longitude (NAD 83). The proposed antenna will be omni-directional, vertically polarized and mounted at 56.4 meters AGL. An ERP of 2.5 kW is being specified.

Allocation Considerations

The FCC has specified a contour distance of less than 28 km for a Class A facility per §73.210(b)(1) of the Rules. §73.211(a)(1)(i) also specifies an ERP of between 0.1 and 6 kW ERP for a Class A facility. The proposed 213A facility is to be installed with a site elevation of 1117.0 meters and a Center of Radiation of 1173.4 meters AMSL (56.4 meters AGL). The standard 8-radial HAAT calculation for this site is 139 meters per §73.313(d).¹ Using the FCC’s FM and TV Propagation Curves tool, the contour distance of the proposal is 26.8 km which is within the parameters for a Class A facility.

Figure 1 is provided to depict the 60 dB μ F(50,50) contour, and to demonstrate that all of Ogallala, Nebraska, the Community of License, is fully encompassed by the contour, thus fulfilling §73.515 of the Rules. For comparison, the authorized 60 dB μ contour is provided with a dashed line.

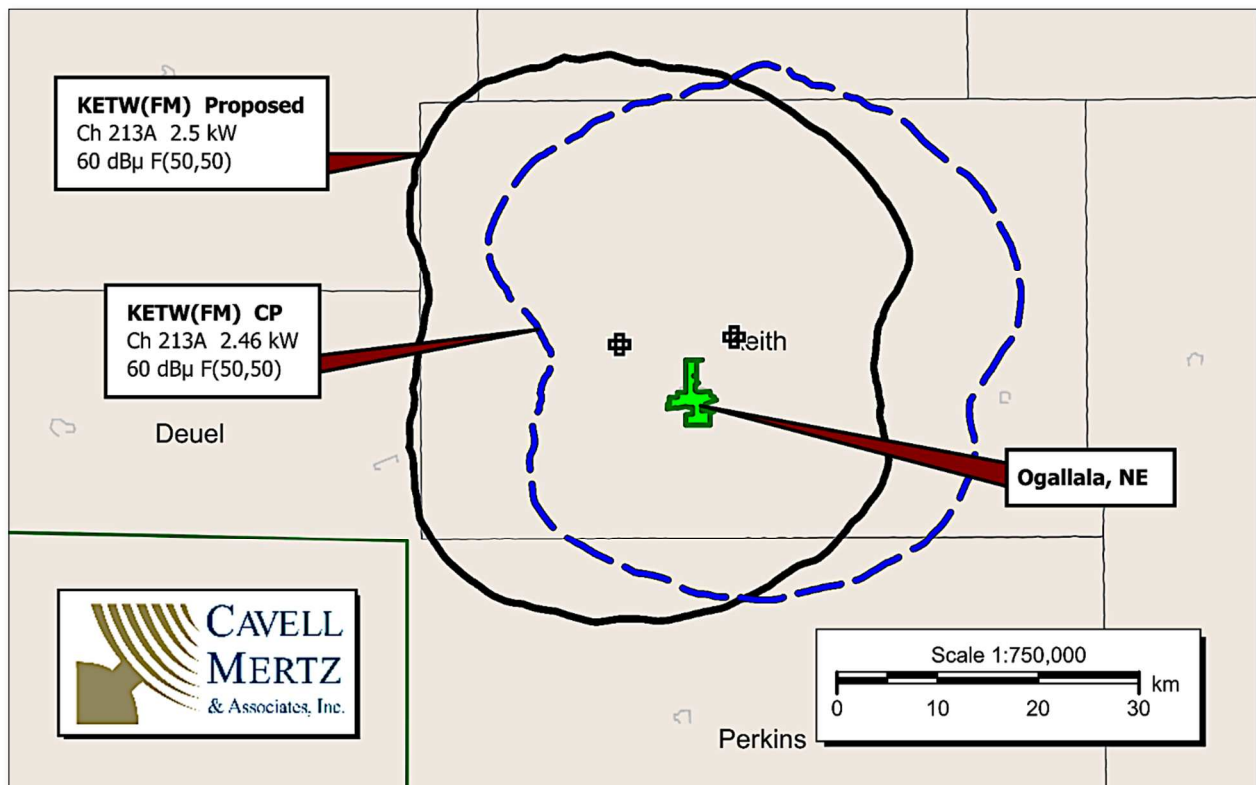


Figure 1 – KETW(FM) Contour Comparison

¹ Details of the HAAT calculation procedure will be made available upon request.

A study of the pertinent surrounding FM facilities was conducted with regard to spacing under §73.207 of the Commission's Rules. In cases where a proposal is not fully spaced to nearby facilities, further study is suggested, and §73.509 is utilized to demonstrate contour protection. **Table I** below identifies the nearest co-channel, first adjacent, and second and third adjacent as well as IF relationship facilities that may require additional study. As shown in the table, the proposed facility is fully spaced to all nearby co-channel and adjacent channel facilities. Thus, further analysis is not required.

Table I – FCC Spacing Requirements

| REFERENCE | | | | | | DISPLAY DATES | | |
|------------------------------------|---------|------------------------------|----------|-----|-------|---------------|----------|-------|
| 41 10 37.00 N. | | CLASS = A | | | | DATA | 12-01-23 | |
| 101 48 28.00 W. | | Current Spacings to 3rd Adj. | | | | SEARCH | 12-01-23 | |
| ----- Channel 213 - 90.5 MHz ----- | | | | | | | | |
| Call | Channel | Location | | Azi | Dist | FCC | Margin | |
| KETW | CP | 213A | Ogallala | NE | 86.2 | 11.38 | 115.0 | 103.6 |
| KTNE-FM | LIC | 216C | Alliance | NE | 305.8 | 127.56 | 95.0 | 32.6 |
| KNNE-FM | CP | 214C3 | Mccook | NE | 142.5 | 127.63 | 89.0 | 38.6 |
| K213EJ | LIC | 213D | Holyoke | CO | 212.2 | 87.44 | 47.0 | 40.4 |

Television Channel 6 Protection

§73.525(a) specifies that proposals for Channel 213 NCE facilities must demonstrate protection to existing Channel 6 stations if they are within 193 km of the station. KWNB-TV is a full service Channel 6 broadcast facility that is located 89.7 km from the proposed Channel 213 facility. According to the Rules, the television Channel 6 station's 47 dBμ F(50,50) must be protected from interference by a Channel 213 facility's 65.5 dBμ F(50,10) contour. In the event of overlap, additional study may be performed to demonstrate compliance or to request a waiver. **Figure 2** depicts the worst case 65.5 dBμ F(50,10) interfering contour of the proposal, including the directivity discussed in §73.525(e)(1)(iii). As demonstrated, there is no prohibited contour overlap between the instant proposal and the Channel 6 facility.

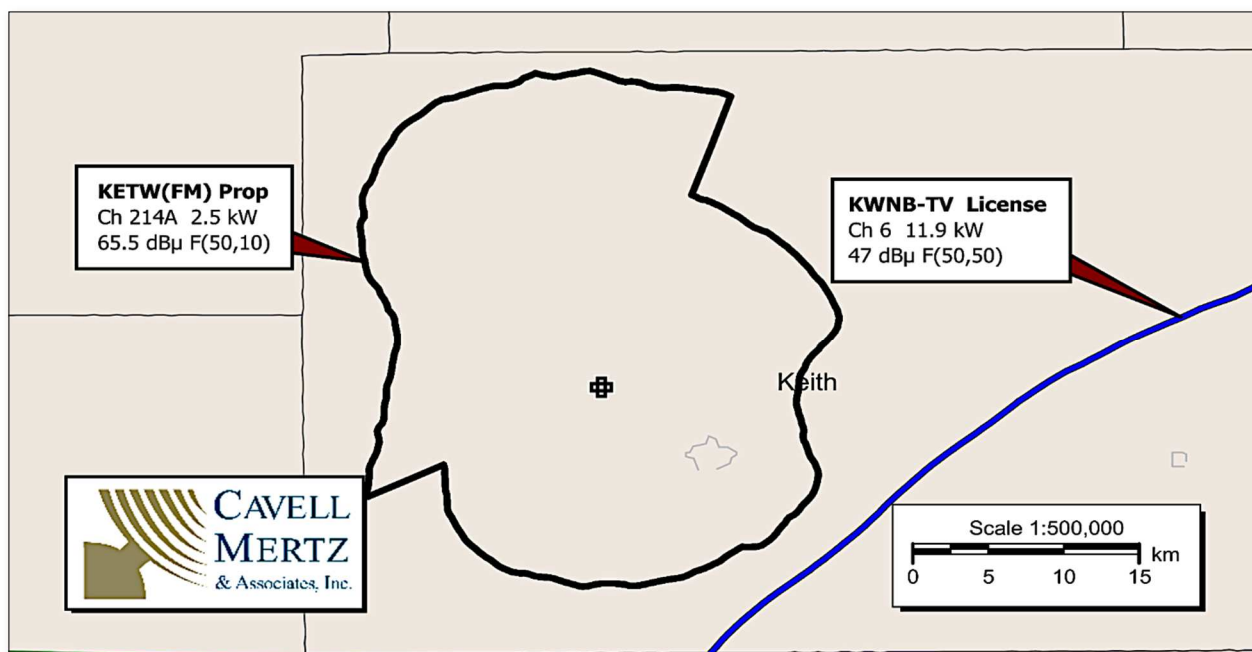


Figure 2 – KETW(FM) Channel 6 Protection

International and Other Considerations

The proposed site is located 869.4 km from the Canadian border, and 1,124.2 km from the Mexican border so International coordination is not required. The nearest FCC monitoring station is 285.5 km distant at Grand Island, NE and the facility is 312.1 km from the Table Mountain Quiet Zone. These distances exceed the threshold minimum distance specified in §73.1030 that would suggest consideration.

It is therefore believed that the proposed facility satisfies all pertinent Commission Rules and Policies now in effect regarding allocation matters.

Environmental Considerations

The proposed facility will operate with an ERI P300-3AE, vertically polarized 3-bay, full wavelength spaced omni-directional antenna at 56.4 meters AGL on the registered tower with ASRN 1056379. An ERP of 2.5 kW is specified. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. Because no change in structure height is proposed, no change in current structure marking and lighting requirements is anticipated. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

Human Exposure to Radiofrequency Electromagnetic Field

The proposed operation was evaluated for human exposure to radiofrequency electromagnetic field using the procedures outlined in the Commission's OET Bulletin 65 ("OET 65"). OET 65 describes a means of determining whether a proposed facility exceeds the radiofrequency exposure guidelines adopted in §1.1310. Under present Commission policy, a facility may be presumed to comply with the limits specified in §1.1310 if it satisfies the exposure criteria set forth in OET 65. Based upon that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

The general population/uncontrolled maximum permitted exposure ("MPE") limit specified in §1.1310 for the entire FM broadcast band is $200 \mu\text{W}/\text{cm}^2$. For the purpose of this study, "public access" will be considered at the base of the tower at locations two-meters above ground. Using the FCC's FM Model program and specifying a worst case EPA Type 1 antenna, it was determined that the proposed facility would contribute a worst-case RF power density of $26.77 \mu\text{W}/\text{cm}^2$ at two meters above ground level near the antenna support structure, or 13.39 percent of the general population/uncontrolled limit.

There are no other broadcast facilities within 5 km of the proposed operation. Therefore, the maximum exposure level expected near the proposed facility will be 13.39 percent of the general population/uncontrolled limit or lower. Accordingly, it is believed that the impact of the proposed operation should not be considered a factor at ground level as defined under §1.1307(b).

Safety of Tower Workers and the General Public

As demonstrated herein, excessive levels of RF energy will not be caused by the proposal at publicly accessible areas at ground level near the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Nevertheless, tower access will be restricted and controlled through the use of a locked gate.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level. A site exposure policy will be employed protecting maintenance workers from excessive exposure when work must be performed on the tower in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines would otherwise be exceeded. Based on the preceding, it is believed that the instant proposal may be categorically excluded from environmental processing under §1.1306 of the Rules, hence preparation of an Environmental Assessment is not required.

Conclusion

Based on the preceding, it is believed that the instant proposal complies with all Commission Rules and policies.