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## MEMORANDUM

**TO:** Nazifa Sawez  
**FROM:** Gregg P. Skall  
**DATE:** November 5, 2008  
**RE:** WFQX-DT Channel 32 Petition

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In connection with the petition for rulemaking to change the WFQX-DT frequency to channel 32, and to move the transmitter site from Kalkaska to Cadillac, MI, the city of license, you have requested information regarding the gain and loss areas and population that will be incurred as a result of the move.

While we will address the gain and loss for WFQX-TV as a stand-alone DT facility, it is important to consider the combined coverage gains achieved by the coordinated allocation requests for WFQX-DT and co-owned WFUP-DT. As explained in the Petition, an additional 134,933 persons will be added to the viewing area just by returning to the Cadillac tower site using channel 32. That move alone makes the channel change worthwhile. Yet, to that must be added the coverage of WFUP on DT channel 45, resulting in service to an additional population of 177,275. Consequently, the total improvement in the stations' combined reach, after subtracting the overlap area, would be a population of 312,208 and their total reach will be 690,208 persons.

However, we have been requested to focus on WFQX-DT alone. In particular, since WFQX-DT is presently operating and licensed on channel 47 at Kalkaska, it would be useful to provide a statistical evaluation of the gain and loss of area and population that would be incurred by the proposed move of WFQX-DT to channel 32 at Cadillac, some forty miles to the south of the present Kalkaska site.

Attached as Figure 4A is an engineering analysis of the coverage area and population of WFQX-DT at the current and proposed locations. Table 1 shows the differences in area and population for DT coverage by staying on channel 47 or moving to channel 32. The theoretical area **not** overlapped by both the contours is as follows:

WFQX-DT	Area	Population
Kalkaska Ch. 47	1,470	14,896
Cadillac Ch. 32	10,881	250,025
Gain By Moving to 32	9,411	235,129
Loss By Staying on 47	-9,411	-235,129

Table 1

Thus, the move to channel 32, relocated at the city of license, Cadillac, will produce DT coverage to an additional 235,129 people over an area of 9,411 square kilometers. While there is a theoretical loss of service to 14,896 persons (8,988 to the west and 5,908 to the east of Kalkaska), that number is only 6% of the gain in population achieved when WFQX-DT is moved to channel 32 at Cadillac.

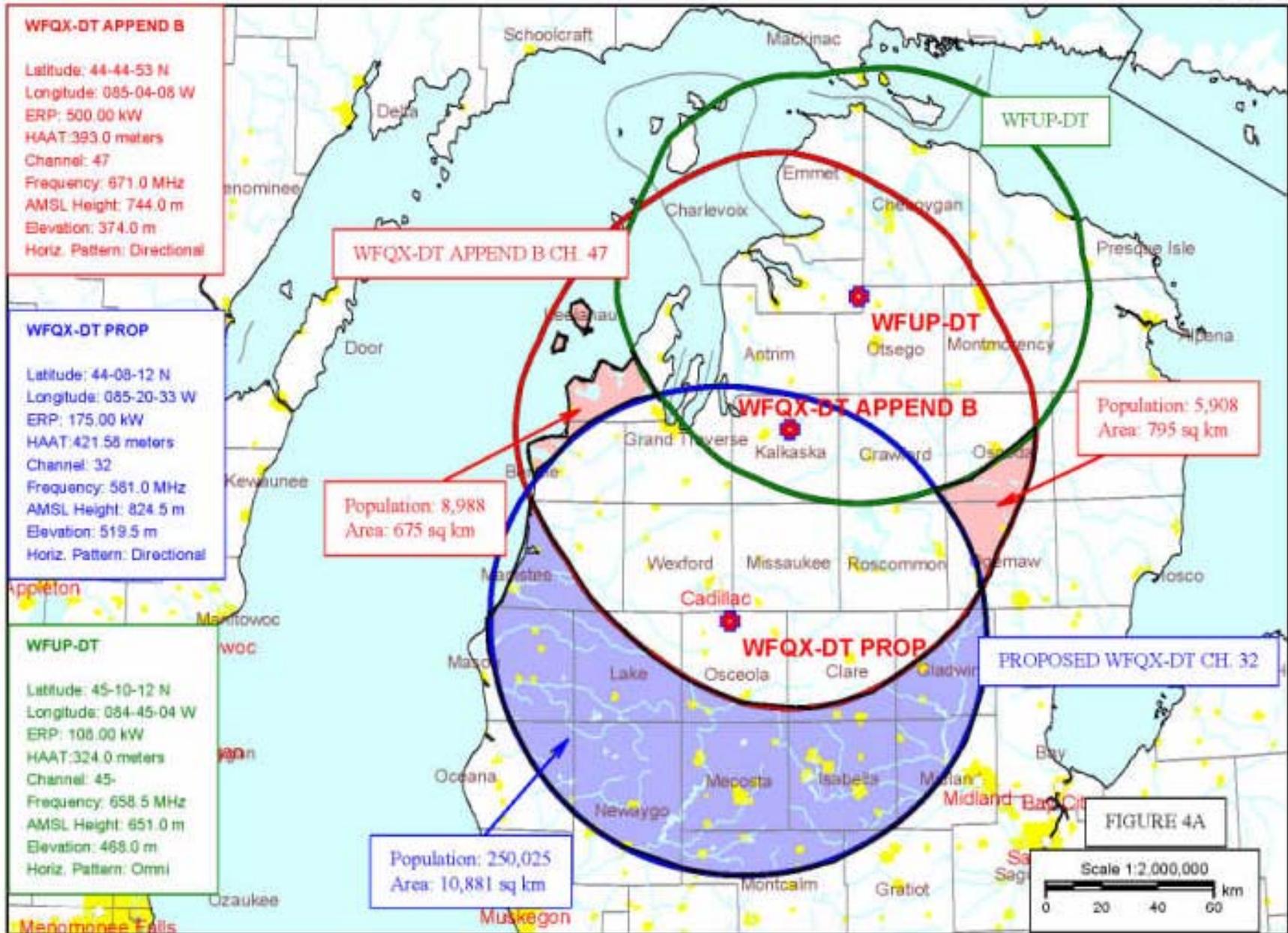
Exhibit 4A further illustrates the inefficiency that would result from leaving WFQX-DT at its Kalkaska location, as it would duplicate much of the service already authorized from WFUP-DT (which broadcasts mostly the same Fox and other programming). In comparison, relocation of WFQX-DT to Cadillac will eliminate most of this overlap in favor of substantial additional coverage to the Southern portion of the market.

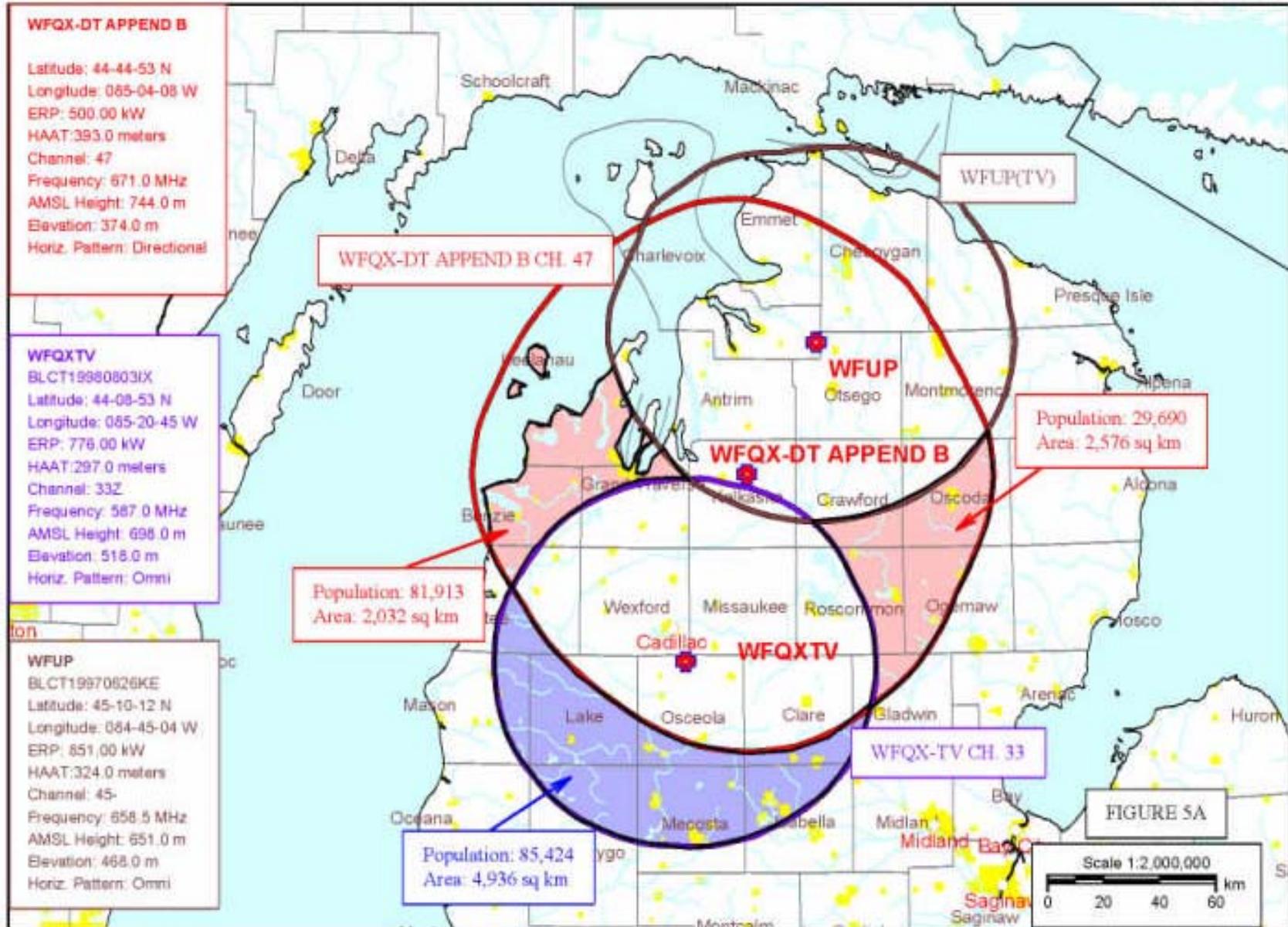
Attached is a declaration of the Chief Engineer of both stations. Based on his considerable experience in serving the stations' coverage areas, addressing viewer technical concerns and interacting with local receiver retailers, he notes that there is little off-the-air DTV viewing of WFQX-DT, and so actual viewing loss resulting from the move from channel 47 at Kalkaska should be minimal compared to the overall population figures. He further affirms significant potential service losses once analog broadcasting ceases over WFQX-TV unless DTV operations are authorized at Cadillac.

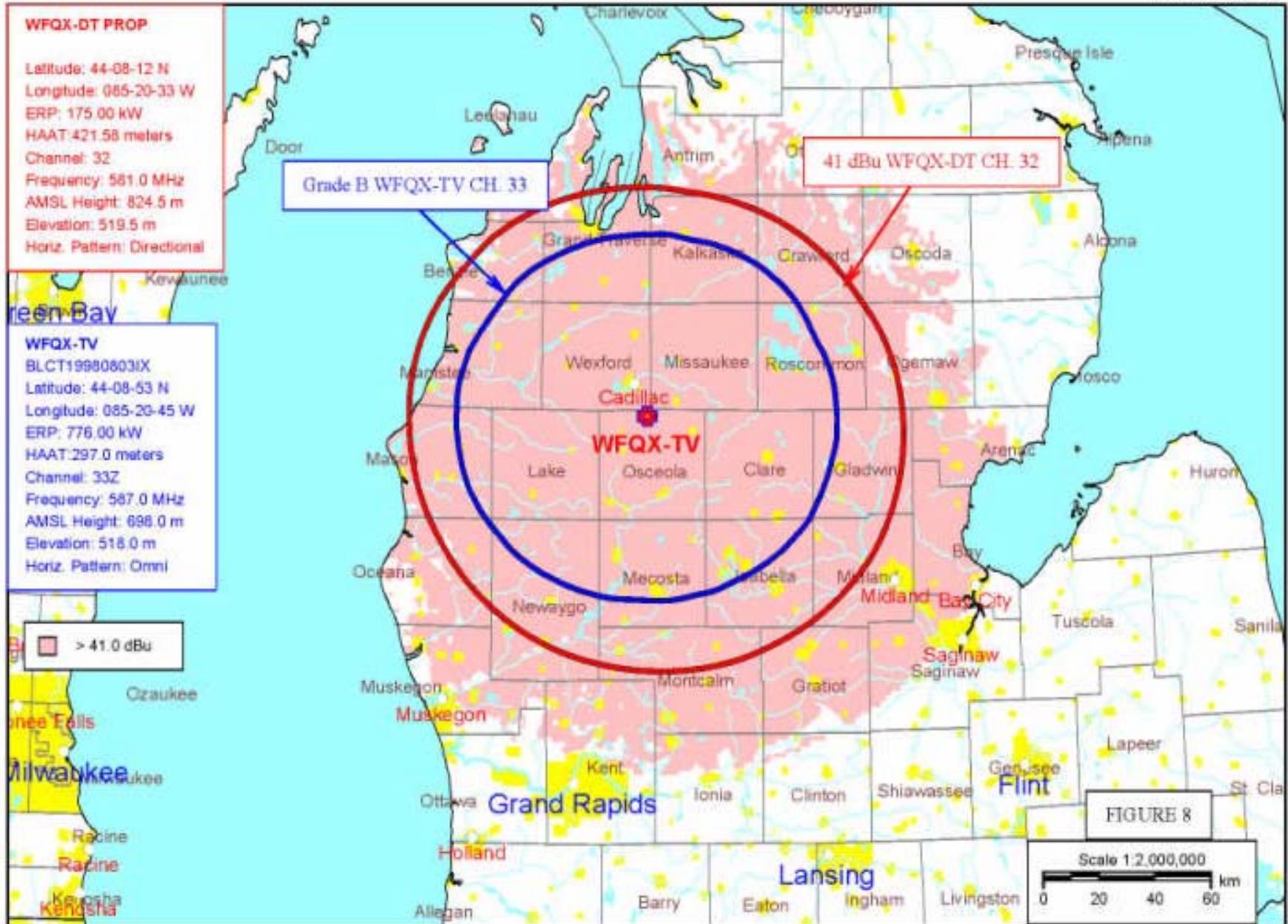
Moreover, while 14,896 represents the *theoretical* loss of viewers, the reality is that they actually will receive the WFQX-DT signal. Attached as Figure 8 is a Longley-Rice study of channel 32 at Cadillac. It shows that the areas of population loss shown in Figure 4A actually are predicted to receive a 41 dBu signal as computed under Longley-Rice, as shown by the pink coverage area. Accordingly, there should be no actual loss of coverage and a great deal of coverage gained.

It is further significant that most of that *theoretical* loss area is also well covered by WFUP-DT when its predicted coverage area is computed with Longley-Rice. See Figure 9. Therefore, it may safely be assumed that most of those 14,896 viewers actually will have *two* choices of channels from nearly polar opposite directions for the WFQX-DT programming (which is also broadcast by WFUP-DT), and may choose among them for the best reception based on any particular terrain factors that apply to their own location.

Further, Figure 10 provides a graphical view to compare the loss area in Figure 5A (which depicts the analog coverage of WFQX-TV at the Cadillac site and WFUP-TV) with the loss area shown in Figure 4A. Figure 10 demonstrates that channel 32 at Cadillac is nearly as effective as the Kalkaska location in adding viewers to the areas east and west presently not covered by the analog signal of WFQX-TV. In reality, there will be no loss of viewers from the present analog coverage, and only a theoretical loss of viewers from the DT coverage of present channel 47.



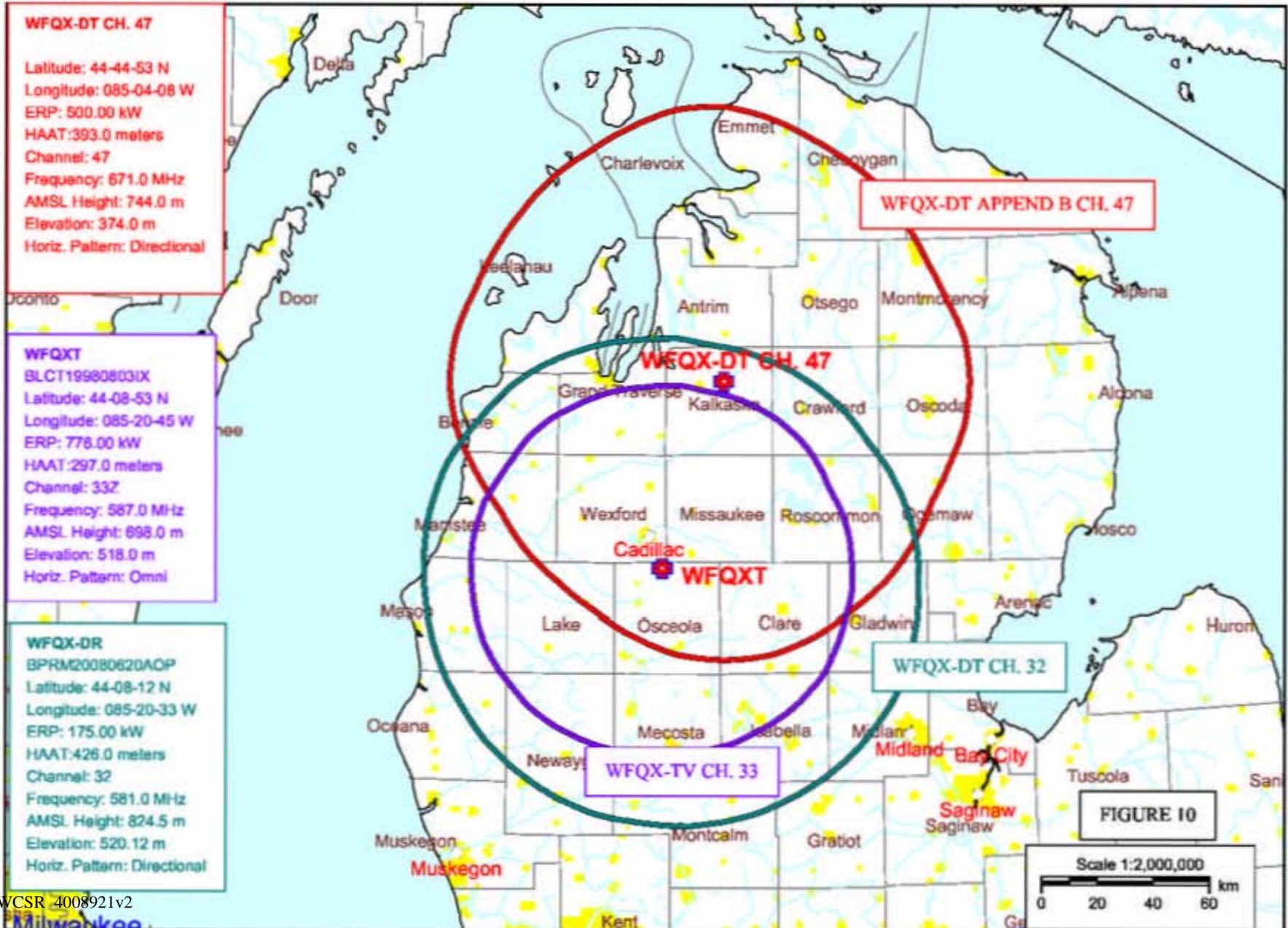






KHANNA & GULL, Inc. - Consulting Engineers

OCTOBER 2008



**STATEMENT OF LOWELL SHORE, CHIEF ENGINEER OF WFQX-TV**

I am Lowell Shore, Chief Engineer of television stations WFQX-TV Cadillac, Michigan and WFUP(TV), Vanderbilt, Michigan. By virtue of my position, I am familiar with the coverage area of the stations. I am also the person who responds to viewer technical concerns and I interact with local retailers of television receivers.

Based on my knowledge of the coverage area, and the potential for loss of service to existing viewers at the time of the DTV cutover, there is a risk of substantial loss of service to existing viewers if WFQX-DT were required to remain on DT channel 47 at Kalkaska rather than move to channel 32 at Cadillac.

Once the analog signal of WFQX-TV ceases operation, there will be a significant loss of over the air service to existing viewers and several smaller cable systems that cannot be reached by channel 47 operating from Kalkaska. The numbers have been documented in the engineering studies submitted by the licensee.

While there is a theoretical loss of service in pie shaped areas to the east and west of Kalkaska that are formed by the areas not within the predicted coverage areas of channel 32 and WFUP-DT channel 45, those areas are less significant. This is because our experience from the existing operation of channel 47 in those areas has led us to realize that there is very little actual off the air DTV viewing of channel 47 at this time, and therefore there will be very little loss of actual viewing of that channel. In fact, those areas will receive very adequate signals from both proposed channel 32 and authorized WFUP channel 45.

Based on my experience, the area will be best served by the combination of WFQX-DT channel 32 and WFUP-DT channel 45.

Submitted under penalty of perjury.

  
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Lowell Shore, Chief Engineer

November 3, 2008