

## **Engineering Statement Emergency STA KFAI Minneapolis, Minnesota**

### Background

KFAI Radio is facing eviction from its long held transmitting site. The new owners of the historic Foshay Building are going to completely refurbish the building, and all current tenants have been told to move by March 15, 2007 at the latest. This includes the transmitter facilities of KFAI. Negotiations with the owners of the adjacent IDS building have been successfully completed, and an agreement is in place to allow KFAI to move as soon as FCC authorization is complete.

KFAI has been operating from the current location at the Foshay Tower since the early 1980's. Operations there were allowed under an agreement between KMOJ and KFAI to allow operations physically closer than allowed under FCC rules at the time. KFAI and KMOJ are second-adjacent to each other, and the agreement called for a number of technical limitations to any future changes proposed by either station. Paragraph 4 of the agreement sets forth that the "objectionable predicted interference would not exceed two percent (2%) of the area with the predicted 60dBu service contour of the objecting station." Paragraph 5 of the agreement deals with the short-spacing issue: Extremely Short Spacing: Notwithstanding the provision of Paragraph 4 of this Agreement, neither party will at any time, as long as this Agreement remains in force and effect, file any application seeking authority to locate the antenna of its station closer than seventy-five one hundredths (0.75) miles from the antenna of the other party's station, measured to the nearest one-hundredth of a mile.

### Discussion

This proposed minor change to KFAI involves moving to an adjacent high-rise building in downtown Minneapolis. Because the IDS building is about 100 meters higher, the contour of KFAI would increase without a commensurate decrease in effective radiated power. So the proposed effective radiated power would reduce to 30 watts non-directional, and essentially duplicate the existing KFAI 60 dbu contour. Therefore, there is no substantial change in the overlap to KMOJ, and the KFAI antenna will only migrate .042 miles (.064 kilometers) closer to KMOJ. This will place the KFAI transmitter at 1.02 miles distant from KMOJ, a slight decrease from the current distance of 1.06 miles. This complies with the KMOJ-KFAI agreement that limits the separation distance to .75 miles or more.

### KFAI Allocation

An allocation study was undertaken to examine any potential overlap to existing or proposed facilities from the new antenna location. The allocation study, along with contour maps, is attached to this engineering statement. A contour map showing the existing and proposed 60 dbu contour is also attached.

This study shows that the proposal to migrate to the adjacent IDS building will result in no overlap to any existing or proposed facilities in the region.

IDS RFR situation

KFAI proposes to install a single-bay non-directional antenna on the rooftop of the IDS building in downtown Minneapolis with an effective radiated power of 30 watts. The new antenna will be mounted on a mast 25 feet in height above the roof surface. This new antenna will be separate from the two other masts atop the IDS building. The other two masts have separate antenna structure registration numbers (1029018 and 1029019). These antenna structures are located in a separate area of the rooftop, and are not a part of this proposal.

The proposed KFAI antenna would produce an RF field that would exceed the public limit of 200 mW/cm<sup>2</sup> at 3.46 meters from the antenna, and would produce 11.86 mW/cm<sup>2</sup> at 6.2 meters from the base of the pole. However, the IDS building rooftop is closed to the public, and there are already RFR procedures in place at the IDS rooftop. KFAI will comply with all RFR procedures already in place, and cooperate fully with any subsequent regulations concerning exposure to radio frequency energy on the IDS rooftop.

Respectfully submitted this 5<sup>th</sup> day of February, 2007

A handwritten signature in black ink, appearing to read 'D. Mussell Jr.', with a stylized, cursive flourish.

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Consulting Engineer