

## TECHNICAL STATEMENT

KDCO(CP), GOLDEN, COLORADO, 1550 KHZ, 0.99-KW D-ND, 0.48 KW DA-N  
ADVANCED MODULATION BROADCASTING, LLC

FCC FORM 301

OCTOBER 2012

The Technical Statement supports minor change to a Construction Permit (BNP-20100216ABH) application for KDCO(CP) Class B station on 1550 kHz at Golden, Colorado, facility ID 161314.

### **Proposed Transmitter Location**

Due to local zoning regulations at its current CP site, KDCO seeks to relocate to a new proposed transmitter site just north of Golden, Colorado. The new site has Industrial zoning, and KDCO has received approvals from Jefferson County to locate the new towers for this facility at this new proposed location.

Two new towers will be constructed with an overall height of 46 meters (151 feet) overall. The center of the two tower array will be located located at N39°-53'-31", W105°-14'-20", NAD 27. The electrical height of these two towers will be 85 degrees, or 45.7 meters (149.8 ft). The proposed ground system will consist of a 20 foot by 20 foot square ground screens located at the base of the tower, with an additional 120, evenly spaced, 48.4 (159.6 feet or ¼ wavelength) meter long radials at the base of the tower. The plot layout shows that some of the radials on certain portions of the property boundaries will be truncated.

### **Blanketing**

There are zero persons residing within the 1000 mV/m contour based on the 2010 U.S. Census data. A map is attached showing the 1000 mV/m coverage area for both the

daytime and nighttime operations. Since there are no occupied homes within the immediate area around the tower site, no blanketing interference issues are anticipated.

### **Community Coverage**

The proposed daytime field strength contours are attached with an exhibit. As indicated, the proposed daytime 5 mV/m contour will completely encompass the city limits of Golden. The 5.179 mV/m nighttime interference free (NIF) contour will encompass 93% of the city of Golden. FCC M-3 ground conductivity data was used in determining the extent of the coverage contours. The nighttime interference free contour study is also attached. The largest contributors were found to be KESJ St. Joseph, MO, and KMRI West Valley City, UT.

### **Daytime Allocation Study**

A daytime allocation study was made utilizing FCC figure M-3. Daytime field strength contours for the proposed 0.99 KW daytime non-directional operation were calculated in accordance with Section 73.183. Based on this analysis, the proposed facility will comply with all relevant allocation criteria. A exhibit is attached showing all of the pertinent co-channel and adjacent channel stations of interest.

### **Nighttime Allocation Study**

A nighttime allocation study was made to determine the limiting station for the proposed operation with 0.48 KW and the two tower directional antenna system. Canadian Station CBE Windsor on 1550 khz was found to be the most limiting. Attached is an exhibit showing compliance to CBE and XERUV Acajete, VC. Also attached are several exhibits showing the protection to all pertinent co-channel and

adjacent channel stations of interest. Also the calculations for the nighttime interference free contour (NIF).

### **Ground Level Radiofrequency Electromagnetic Field Exposure and Environmental Statement**

A fence restricting access will be installed at the base of the tower to assure that persons on the property outside the fenced area will not be exposed to radiofrequency field levels in excess of those recommended by ANSI. Using Figures 2 and 3 of Supplement A to OET Bulletin 65, the worse case interpolated distance at which the electric and magnetic fields would fall below ANSI guidelines is less than 5 meters. A fence will be 3 meters (10 feet) square centered around the base of the tower. RF radiation signs will be posted on each face of the fencing. This is in compliance with the standards specified in Section 1.1307(b) for human exposure to radiofrequency radiation. The station will cease operation when maintenance work is performed on the tower to insure safety to tower personnel.

Local zoning approval has been obtained for the construction of the two new 151 foot towers by Jefferson County, as well as the necessary building permits have been obtained. These new towers will be constructed in a designated Industrial Park complex north of Golden. All environmental concerns have been met by Jefferson County. While the applicant feels that that the new tower construction should be categorically excluded from any further environmental processing under the provisions of 47 CFR 1.1306 and 1.1307, a full NEPA study has been contracted to be conducted at the new site, and a form 620 will be filed as soon as possible in regards to this new tower construction.