

**ENGINEERING EXHIBIT  
APPLICATION TO MODIFY CONSTRUCTION PERMIT  
BXPB20050309ADE  
KFZO(FM) AUXILIARY  
KHCK-FM LICENSE CORP.  
DENTON, TEXAS  
Channel 256C**

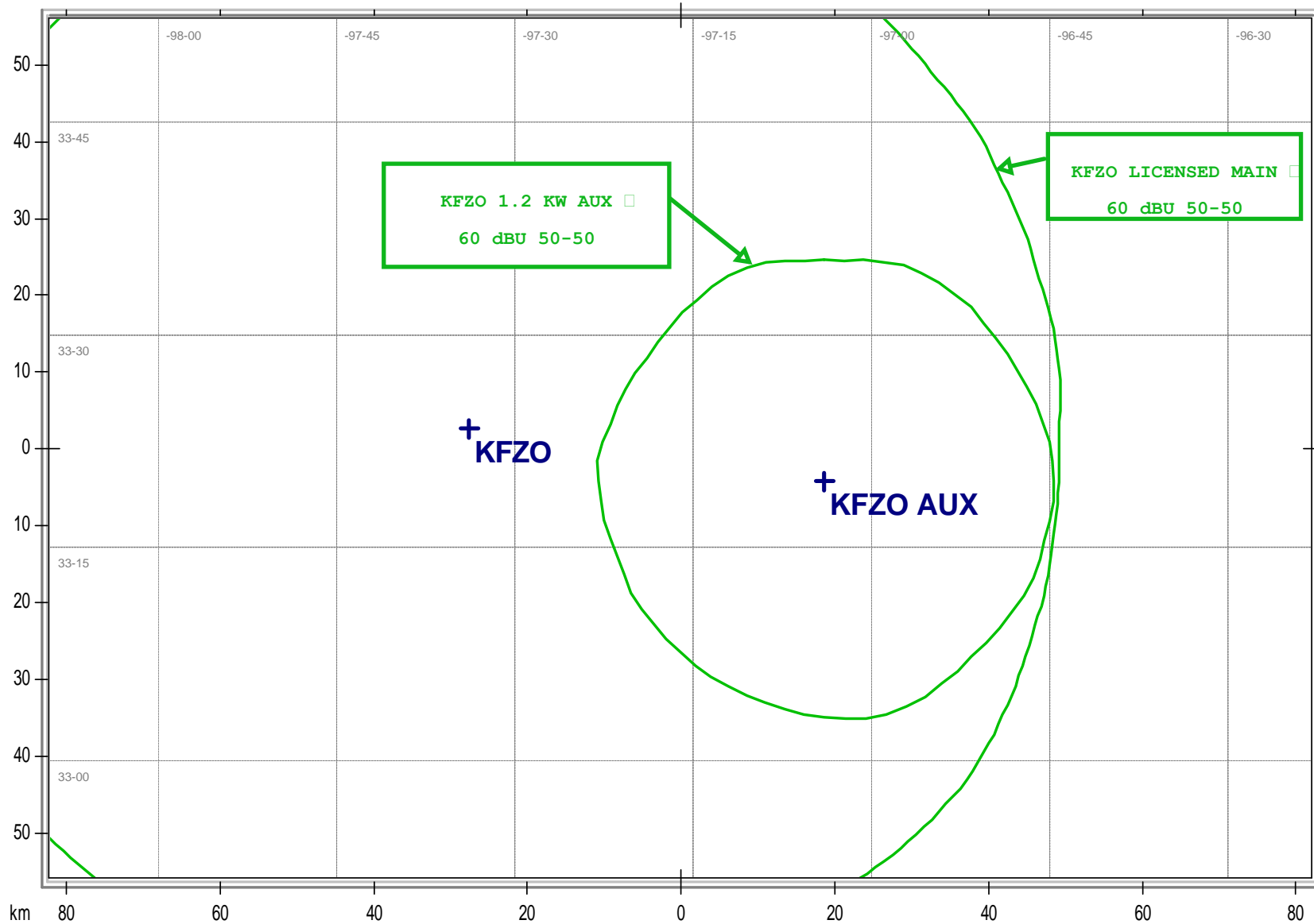
This exhibit and statement were prepared on behalf of KHCK-FM License Corp. KHCK-FM License Corp. proposes to modify this existing construction permit. This modification will utilize the existing tower, an existing antenna and transmission line as an auxiliary facility. The proposed facility will comply with the requirements of 73.1675 with an effective radiated power of 1.2 Kilowatts horizontal and vertical at 243 Meters HAAT. The one Milivolt contour of the proposed auxiliary site does not exceed the one Milivolt contour of the licensed main. Please see the next pages for predicted contours of the proposed auxiliary and the main as calculated by Comstudy 2. The existing antenna utilized will be an 8 bay ERI "Rototiller" type. At the KFZO frequency, this antenna is a .91 wavelength spaced antenna. This antenna is also licensed to KESS FM, Facility ID 57376, as an auxiliary antenna. As there is no intention of installing combining equipment, this antenna will have the capability of operating with only one user at a time. It will not be possible to make spurious measurements with both auxiliary facilities operating into the antenna. This site is considered a multiple user FM site, as KESS-FM has a licensed main on the same tower. The tower registration for this site is 1229545. The coordinates for this tower in NAD27 datum are: 33°-19'-42" North Latitude 97°-03'-56" West Longitude.

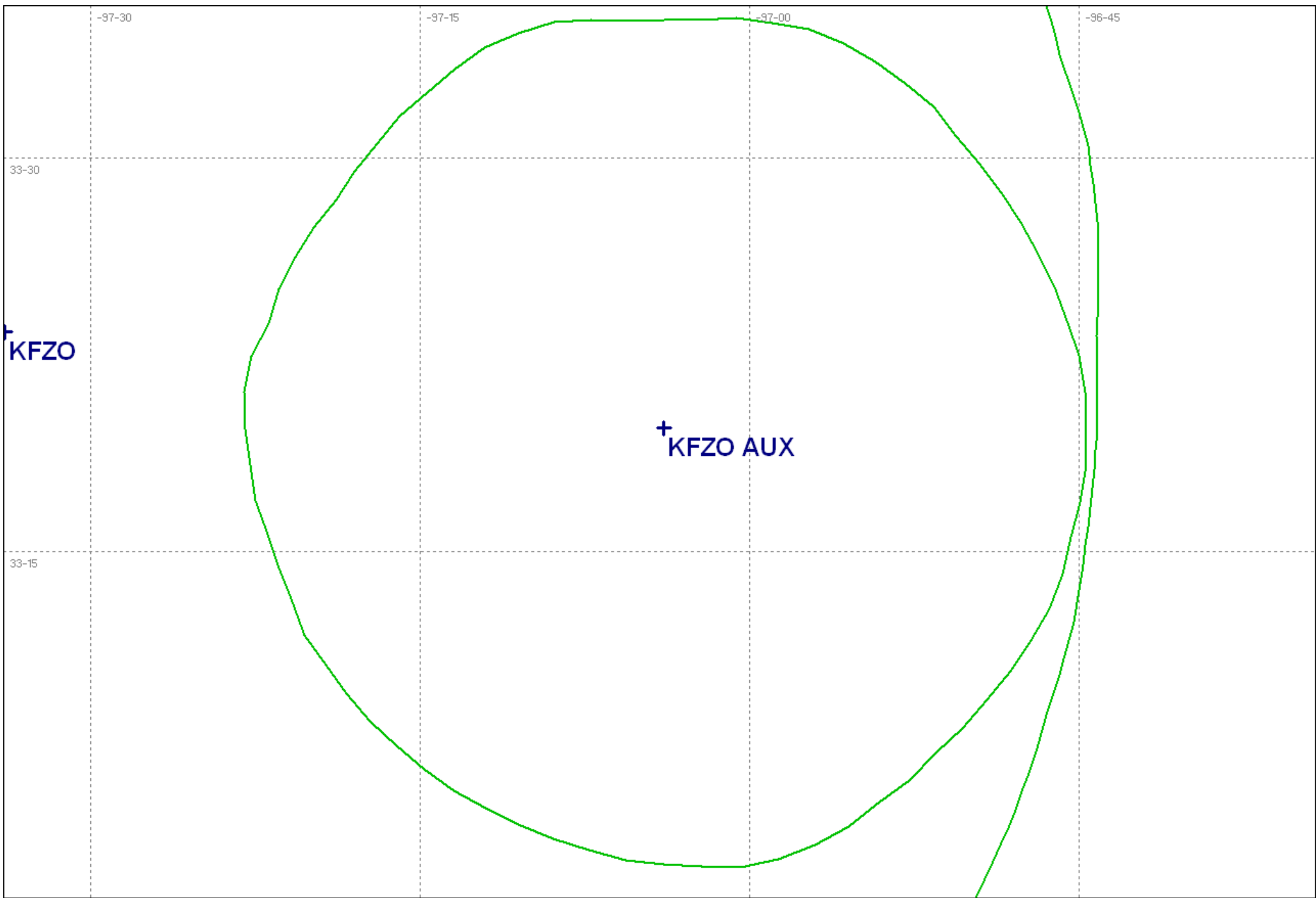
Operation of the proposed modified auxiliary facility were evaluated in terms of a potential radio frequency radiation hazard to the general population and workers at ground level in accordance with OET Bulletin 65, "Evaluating Compliance With FCC Guidelines For Human Exposure To Radiofrequency Electromagnetic Fields", Edition 97-01. RFR safety compliance was determined using OET FM Model program. For the proposed KFZO auxiliary antenna, the maximum power density level contributed by the operation would be .000009 microwatts/centimeter<sup>2</sup> or .000045 percent of the maximum for general population,

uncontrolled exposure at two meters above ground level. This maximum level occurs at 122 meters from the base of the tower. This is well below 5% of the maximum level for general population, uncontrolled exposure and exempts the applicant from further study. The base of the tower is fenced as the entire tower site. The site is located in a remote rural area. There are signs warning of RF radiation hazards to climbers.

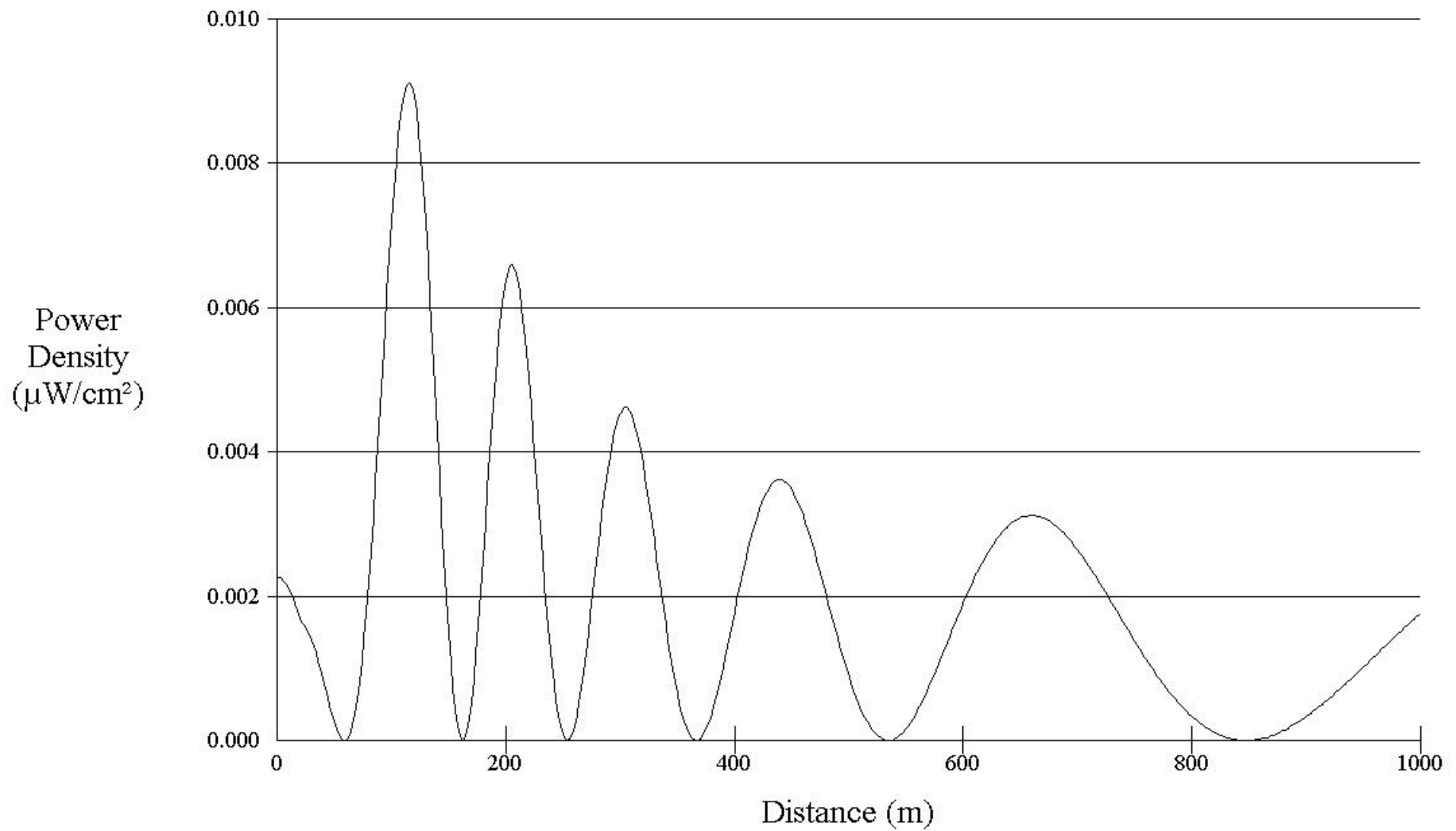
As the proposed auxiliary will be used rarely, for backup and emergency purposes only, it will not be necessary to have the antenna energized in the event of work on the tower.

This application is excluded from environmental processing as defined in 47C.F.R. 1.1306, and 1.1307, as it is merely to operate an existing antenna system on an existing tower for auxiliary purposes. No other changes to the site will be made as a result of a grant of this application. As described above, the site will meet the RF radiation safety requirements outlined in 47C.F.R. 1.1310.





## Power Density vs Distance



Office of Engineering and Technology

Distance (m):  Antenna Type:

Horizontal ERP (W):

Vertical ERP (W):

Antenna Height (m):

Number of Elements:

Element Spacing: