K254DP – Pasco, WA

FacID# 202331 – 98.7MHz

Form 350 – Exhibit #3
Environmental Effect

RF radiation from the proposed facility has been reviewed in accordance with the radio frequency protection guides adopted by the Commission in OET Bulletin No. 65, edition 97-01, and will not have a significant environmental impact.

The proposed antenna system consists of a Kathrein-Scala CA2-FM/CP circularly polarized directional antenna with its center of radiation 21 meters above ground level. Utilizing the FCC FM Model calculator and an EPA Type 1 'Other' antenna as a worst-case condition, the maximum power density generated by the facility at ground level is predicted to be 27.9 uW/cm^2 at a distance of 5.2m from the base of the supporting structure. As this is greater than 5% of the maximum power density permitted for general population/uncontrolled environments, further analysis to include the RFR contribution of the co-located auxiliary FM antenna authorized for KORD-FM, KOLW(FM), KEYW(FM) and KXRX(FM) was performed.

The auxiliary FM antenna operates on a mutually-exclusive basis for the above-mentioned stations at an authorized effective radiated power of 2kW with a 2-bay .85 wavelength-spaced Bext TFC2K-2 antenna. Utilizing the FCC FM Model calculator and an EPA Type 2 'Opposed V Dipole' antenna, the maximum power density generated by the auxiliary facility at ground level is predicted to be 23.8 uW/cm^2 at a distance of 11.6m from the base of the supporting structure.

Even if the peak radiation levels from the two antennas were to coincide at the same distance from the base of the supporting structure, which they do not, the maximum arithmetic value would be 51.7 uW/cm^2, or approximately 26% of the maximum power density allowed for general population/uncontrolled environments. As such, it is concluded that the addition of the proposed translator facility will not have a significant environmental effect.

The applicant certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radio frequency electromagnetic fields in excess of FCC guidelines.