

**ENGINEERING STATEMENT RE;
RF COMPLIANCE STATEMENT
K57EL, EUGENE, OREGON
CALIFORNIA OREGON BROADCASTING, INC.**

INTRODUCTION

This statement was prepared on behalf of California Oregon Broadcasting, Inc., the licensee of LPTV station K57EL (Facility ID 8357) in Eugene, OR. K57EL is shifting to channel 19 with a new antenna at its existing site. This statement provides a showing of compliance with the Commission's radio frequency (RF) exposure rules for the proposed facility.

R.F. EXPOSURE ANALYSIS

Access to the site is very difficult. The site is remotely located and all access roads are blocked by locked gates. The antenna site is fully fenced with signs warning of R.F. exposure and restricting access to the site and at all buildings. Access is restricted to authorized persons only and general public access is not allowed at the private sites. Therefore Un-Controlled Environment exposure is not an issue. This is a multiple user site.

The LPTV facilities, proposed in this application are; 10kW ERP, channel 19 at an antenna height of 18 meters AGL. The antenna type is a Scala model 1x2KBBU (K723147) panel antenna with a directional horizontal and vertical plane pattern. The antenna vertical pattern is illustrated on the plot attached at Exhibit 9.

R.F. exposure values have been calculated based on the restricted vertical plane relative field radiated downward, which does not exceed 26% for any angle more than 26

degrees below the horizontal. The aural power is limited to 10% of the maximum visual power. For the above conditions the ground level exposure is calculated at $35 \mu\text{W}/\text{cm}^2$. The FCC adopted R.F. exposure limit at channel 19 is $1671 \mu\text{W}/\text{cm}^2$. The ground level exposure is therefore 2.1% of the FCC controlled environment guideline.

This R.F. analysis shows that K57EL does not have a significant effect on the quality of the human environment and does not require environmental assessments. It is categorically excluded from environmental processing by Section 1.1306 of the Commission's rules since the specified antenna will be supported by an existing tower and the guidelines for human exposure to radio-frequency (RF) energy in Section 1.1307(b) will not be exceeded as described below.


The LPTV site is an established communications site. Access to the tower area is limited by gated roads over fenced private property and further controlled using warning signs such that Un-Controlled exposure is not possible. The site and surrounding area was evaluated for compliance with the maximum permissible exposure (MPE) limits with respect to the facilities specified. Compliance with the appropriate limits were established based on an estimation of ground-level power density using the Commission's adopted RF Exposure calculation methods outlined in *OET Bulletin No. 65, Version 97-01*.

The predicted RF exposure at ground level is shown above and also expressed as a percentage of the FCC Controlled Environment exposure limit. The estimated level of exposure does not exceed approximately 2.1% of the FCC adopted Controlled Environment exposure guideline.

R.F. EXPOSURE COMPLIANCE

The restricted and controlled access transmission site does not allow for the ready access of the general public and therefore uncontrolled exposure is not possible at the translator site. It has been demonstrated above that the facilities comply with the FCC adopted controlled exposure guideline, at any ground level location. Un-controlled exposure is not possible. At higher elevations on the antenna structures, workers will be protected from excessive exposure to RF fields in accordance with the methods recommended in *OET Bulletin No. 65, Version 97-01*. Preventive steps for protecting workers at elevations above ground level include shutting down facilities and reduced power operation.

Respectfully submitted,
LOHNES AND CULVER

by 
Robert D. Culver, P.E.
MD. Reg. No. 19672

8309 Cherry Lane
Laurel, Maryland

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