

**ENVIRONMENTAL CONCERNS  
RF COMPLIANCE STATEMENT  
NEW DTV 943 KW 350 M AGL CH. 45  
GREELEY, COLORADO  
APRIL, 2006**

**INTRODUCTION**

This statement is prepared on behalf of Richland Reserve, LLC (Richland), an applicant proposing construction of a new DTV transmission facility for an Auction 64 allotment on which it was the successful bidder. All information contained in this statement has been prepared and presented in compliance with the current FCC Rules and policies.

**PROPOSED FACILITY**

The new facilities specified for Richland involve a maximum ERP of 943 kW at an antenna height of 350 meters AGL. The antenna is a Dielectric pylon antenna, type number TFU-30DSC-R O4, with 0.75 degrees of electrical beam tilt which will be mounted on the side of a new tower. The general antenna site is located in the center of very remote and rural ranch land. The immediate site is open range with irrigated crop land to the south and the only nearby structures being windmills. There is no significant access by the public near the base area of the proposed antenna supporting structure nor any cultural attraction in the area. General observations indicate that the proposal is not a major environmental action and a more narrowly focused inspection will be made to confirm this. The immediate antenna site access will be further controlled by gated roads, fences and signs as necessary to assure no casual public access.

**R.F. EXPOSURE ANALYSIS**

The antenna radiated field was evaluated using the power and height listed above

and elevation pattern data supplied by the manufacturer in drawing No. 30Q255075-90. The relative field pattern limits the downward signal to less than 10% of maximum for all angles exceeding 10 degrees below the horizontal. Exposure calculations have been made in accordance with FCC and ANSI methods and the method specified in FCC *OET Bulletin No. 65*. It was assumed that the antenna emissions are undistorted by the tower mounting and that the RF signals are projected uniformly around the tower.

The Richland facility will contribute a portion of the RF exposure at this site which may also include other RF transmission facilities in the future. From the antenna vertical field pattern described above, it is known that the relative field does not exceed 10% for any angle greater than 10 degrees below the horizontal plane. The maximum ground level R.F. exposure value at the point of closest possible approach, directly below the antenna, was calculated from these parameters to not exceed  $2.6 \text{ uW/cm}^2$  (microwatts per square centimeter). Lesser exposure levels occur at greater distances out from the base of the antenna and in the many areas of more suppressed vertical field.

The FCC specified maximum controlled exposure level at TV channel 45 is  $2200 \text{ uW/cm}^2$ . The proposed Richland operation contributes approximately 0.12% of the FCC Controlled Environment exposure guideline and 0.6% of the Un-Controlled exposure guideline. Both are far less than 5% of the FCC adopted exposure guideline for either environment. Since the estimated “worst case” contribution for the facility is less than 5% of the FCC adopted limits, the applicant is not required to further evaluate the antenna location with respect to other (future) RF contributors.

## **R.F EXPOSURE CERTIFICATION**

R.F. exposure will not exceed the FCC adopted guidelines around the base of the

tower and for a limited distance above ground level for the purpose of tower climbing will not exceed the Controlled Environment guideline. A consideration of the currently proposed and various eventual users of the tower suggests that the controlled exposure limit will be reached at various elevations on the tower, near any operating antennas.

At higher elevations on the antenna structure workers will be protected from excessive exposure to RF fields in accordance with the methods recommended in OET Bulletin No. 65, Version 97-01. Richland will also adopt a work policy for coordinating with other site users. Preventive steps for avoiding excessive exposure may include scheduling work while the facility operates at reduced power or is shut down.

Respectfully Submitted

**Lohnes and Culver**

by 

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