

**RF COMPLIANCE STATEMENT
DTV BROADCAST STATION
CONSTRUCTION PERMIT APPLICATION
WGSB-DT 1000 kW ERP, 351 M AGL CH. 35
BAXLEY, GEORGIA**

INTRODUCTION

This statement was prepared on behalf of the Southern TV Corporation, applicant for a new DTV station permit at Baxley, Georgia. It provides a showing of compliance with the Federal Communication Commission's radio frequency (RF) exposure rules in support of an application for a modified Construction Permit for that new facility. The DTV facility will operate on TV Channel 35 (599 MHz) from an existing multiple user tower near Savannah, Georgia.

The station will employ a Dielectric antenna with a center height of 351 meters Above Ground Level (AGL), 349 meters Above Average Terrain (AAT), and with an effective radiated power (ERP) of 1000 kW in the horizontal plane. The proposed antenna is a multiple layer slot array radiator that will be side mounted with other antennas on a existing guyed tower. The Antenna Structure Registration No. Is 1032657 with an overall structure height of 467 meters above ground level (AGL).

R.F. EXPOSURE ANALYSIS

R.F. analysis shows that the planned operation does not have a significant effect on the quality of the human environment and does not require an environmental assessment. 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 proposed facility does not result in RF contributions exceeding the *RF Radiation Exposure Limits* specified in Section 1.1310. The specific proposed antenna is a slot array radiator with nominal electrical beam tilt. Effective radiated power in the main beam is 1000 kW and the antenna center is positioned at 351 meters above ground level.

The general antenna site is in a rural areas of western Chatham County Georgia, west of Savannah and east of the Fort Stewart Military Reservation. The antenna site is at an established communications antenna farm where several primary FM and TV broadcast facilities are located on the existing tower and at other towers nearby. Access to this rural transmitter tower is limited and controlled using warning signs, fencing and locked gates.

Since the antenna location is physically isolated from the general population, compliance with the uncontrolled exposure guidelines is not an issue. However, the site area was evaluated for compliance with both the controlled and uncontrolled area maximum permissible exposure (MPE) limits. Compliance with the limits was established based on a “worst case” estimation of ground-level power density using the Commission's procedures outlined in OET Bulletin No. 65, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio-frequency Electromagnetic Fields. The calculation equations in that bulletin predicts the power density levels accessible at locations two meters above ground for various antenna types.


It is predicted that the proposed antenna will generate a worst case ground-level power density contribution that does not exceed $5 \mu\text{W}/\text{cm}^2$ below the antenna or at any horizontal distance out from the antenna supporting structure. The FCC maximum permissible Controlled environment exposure guideline at TV channel 35 is $1,997 \mu\text{W}/\text{cm}^2$.

The estimated exposure level is approximately 0.23% of the FCC adopted controlled exposure guideline and approximately 1.15% of the uncontrolled guideline. The estimated exposure does not exceed 5% of the FCC Maximum Permissible Exposure (MPE) limit for either controlled or uncontrolled exposure ($399.4 \mu\text{W}/\text{cm}^2$). Therefore, the applicant is not required to further evaluate the antenna location with respect to other RF contributors.

R.F. EXPOSURE COMPLIANCE

The isolated and controlled access transmission site does not allow for the easy access of the general public and therefore un-controlled exposure is not an issue at the proposed DTV transmitter site. It has been demonstrated above that the proposed facility complies with the FCC adopted controlled exposure guideline at ground level. 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*. In regard to other site users, cooperative strategies shall be observed during periods of scheduled tower maintenance. Preventive steps for protecting workers at elevations above ground level include shutting down facilities and reduced power operation.

Respectfully submitted,
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