
BERNARD R. SEGAL, P. E.
CONSULTING ENGINEER
KENSINGTON, MARYLAND

ENGINEERING EXHIBIT
FLASH-CUT APPLICATION FOR
DIGITAL TRANSLATOR CONSTRUCTION PERMIT
WYFF HEARST TELEVISION INC.
STATION W09AS, BURNSVILLE, NORTH CAROLINA
CHANNEL 9 0.0128 KW (MAX-DA)

WYFF Hearst Television Inc. (hereafter, Hearst) is the licensee of analog television translator Station W09AS, Burnsville, North Carolina. The CDBS record for the station specifies operation on Channel 9 with a peak visual effective radiated power of 0.006 kW and a non-directional antenna. The specified antenna radiation center height is 1341 meters above mean sea level. By means of the instant application, Hearst seeks a construction permit to flash-cut the W09AS analog operation to digital. To identify the digital operation in the discussions herein, the "LD" suffix has been added to the W09AS call sign.

The proposed operation for Station W09AS-LD is from the same site as for Station W09AS. Thus, the fundamental requirement of service contour overlap for qualification for a flash-cut application is achieved. The proposed Channel 9 digital operation is for a maximum effective radiated power of 0.0128 kW using a directional antenna. While the same site is to be employed for the proposed digital operation as for the present analog operation, small, updated, elevation data changes, based on currently available sources, are provided.

The radiation center for the antenna is 1331 meters AMSL. The site NAD '27 geographic coordinates are: 35° 56' 16" N. Latitude; 82° 17' 48" W. Longitude. A filter that provides a so-called, "simple mask" will be employed as part of the transmission system installation. The transmitter will meet FCC performance requirements for a digital translator.

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The W09AS antenna supporting tower is atop Phillips Knob in Yancey County, North Carolina. The overall height above ground level of the tower with the antenna is 25 meters. The structure does not require an ASRN.

The antenna consists of two Taco, Model Y-103-9, 10-element Yagi antennas, skewed 65°. The major lobe of radiation is oriented 170° True. The relative fields for the composite antenna are furnished on Form 346. The maximum power gain for the composite antenna is 6.3 dBd. A translator with an average power output of 3 watts will be employed. The transmitter's 3 watt output will be fed to the antenna by means of a 22.9 meter (75-foot) length of Andrew, type LDF5-50 coaxial cable. The transmission line efficiency at Channel 9 is 91.6 % (attenuation = 0.38 dB). The proposed operation will yield a maximum effective radiated power of 12.8 watts (0.0128 kW) along the 170° true axis.

Allocation concerns have been considered for this proposal using the Longley-Rice prediction methodology in accordance with the provisions set forth in OET Bulletin 69. For interference analysis purposes, the undersigned employed a Sunblade computer and the "tv_process_dlptv_pt" program that was developed for the FCC by Mr. William Meintel. The undersigned has repeatedly replicated FCC results with the Sunblade computer and the mentioned program. The post transition database was used. Also, the cell size used was 1 kilometer on a side and the terrain sampling intervals were 1 kilometer.

The allocation study results for the proposed W09AS-LD operation show that no full service station, low power station, or Class A station will be caused excessive interference according to FCC criteria.

The impact that effectuation of the instant proposal could have on the environment has been considered using the criteria set forth in the Commission's Rules as the touchstone for evaluation. Since the proposed W09AS-LD operation will be from a site that is currently used for broadcasting, only the particular environmental concerns relating to radio-frequency radiation (rfr) exposure to the general public and to workers are germane.

The FCC's adopted limit at Channel 9 (186-192 MHz) for general public, whole body, unrestricted time, rfr exposure is 0.2 mW/cm^2 . A test calculation has been performed for the proposed W09AS-LD operation toward an imaginary target that is located two meters above ground level at the base of the antenna supporting tower. The base of the tower is the closest that a member of the general public could get to the tower. The 2-meter height above ground level elevation approximates the height of a standing person's head.

The distance used for the calculation was 23 meters. As recommended in O.E.T. Bulletin 65, Edition 97-01, a ground reflection coefficient of 1.6 was employed. For the purpose of the study evaluation, flat earth was assumed in the vicinity of the tower site. In the interest of conservatism, no allowance was made for vertical plane directivity. The test calculation yielded a power density level of 0.00081 mW/cm^2 at the target, corresponding to a contribution of 0.4 % of the maximum permitted exposure (MPE) of 0.2 mW/cm^2 . The proposed operation will comply with the FCC's MPE requirements for uncontrolled (general public) locations.

As to controlled (worker) location rfr exposure concerns, a radiation hazard warning sign is posted at the road entry gate, and excitation to the antenna is terminated

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whenever work must be performed on, or near the antenna.. It is believed that these procedures are adequate to avoid overexposure of workers to rfr.

The instant proposal complies with the FCC's adopted standards for controlled and uncontrolled locations. An Environmental Assessment is not required for this proposal.

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 3, 2010.



Bernard R. Segal, P. E.

Maryland Registration # 25811