

ENGINEERING EXHIBIT
AMENDED FLASH-CUT APPLICATION FOR
DIGITAL TRANSLATOR CONSTRUCTION PERMIT
WYFF HEARST TELEVISION INC.
STATION W11AU, CANTON, ETC., NORTH CAROLINA
CHANNEL 11 0.030 KW (MAX-DA)

WYFF Hearst Television Inc. (hereafter, Hearst) is the licensee of analog television translator Station W11AU, Canton, Etc., North Carolina. The station operates on Channel 11 with a peak visual effective radiated power of 0.200 kW using a directional antenna. The license indicates that the antenna radiation center height is 1387 meters above mean sea level. A construction permit application, File Number BDFCDTV-20101123APA, is pending to “flash-cut” W11AU to digital operation.

By letter, dated January 10, 2011, reference 1800E1-MFC, the applicant was advised that the flash-cut proposal did not comply with the interference rules since interference would be caused to Station W12AR, BLTTV-4877, Channel 12, Waynesville, NC. The instant amendment, in response to the FCC letter, eliminates the interference question with respect to Station W12AR.

Instead of the “simple” mask filter that was originally set forth, the W11AU flash-cut proposal, now, is amended to specify use of a “stringent” mask filter. No other technical changes are proposed. Except for the change in the filter, all previously submitted information is repeated since “no change-on file” responses are not permitted.

The maximum effective radiated power remains 0.030 kW (average). The site NAD '27 geographic coordinates are: 35° 34' 18.6" N. Latitude; 82° 54' 02.5" W. Longitude. These coordinates represent a correction to the coordinates currently specified for W11AU. The transmitter will meet FCC performance requirements for a digital translator.

The W11AU antenna supporting tower is atop Chambers Mountain and is 18.3 meters high. The antenna extends 0.5 meter above the supporting tower top. The structure does not require an ASRN. However, a small, (approximately, 5 meter), correction in the antenna radiation center height above ground level and above mean sea level is set forth herein.

A translator with a 3 watt digital power rating will be employed. The existing analog antenna system will be employed for the digital operation. The antenna consists of two stacks, with each stack consisting of four Taco, Model Y-103-11, 10-element Yagi antennas in a quad configuration. The first antenna stack is oriented 120° True, and the second antenna stack is oriented 232° True. A 50/50 power divider will funnel half of the transmitter output power of 3 watts to the antenna stack that is oriented 120° true. The remaining 50 % of the power will be directed to the 232° antenna stack.

The interconnecting transmission line cable to each antenna consists of a 15.2 meter length of Andrew, type LDF4-50 cable, having an attenuation of 0.49 dB. The relative fields for the composite antenna are furnished on Form 346. The maximum power gain for the composite antenna is 13.5 dBd. After taking into account the transmission line loss and antenna power gain, the maximum ERP will be 30 watts (0.03 kW).

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_2010” program that was developed by Mr. William Meintel. The undersigned has repeatedly replicated FCC results with the Sunblade computer and the

mentioned program. The cell size used was 0.5 kilometer on a side and the terrain sampling intervals were 0.25 kilometer.

The allocation study results for the proposed W11AU-LD operation show that no television or Class A station will receive interference exceeding 0.5 % and no translator, or LPTV station, will receive interference exceeding 2 %. The proposed operation complies with FCC interference protection 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 W11AU-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 11 (196-204 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 W11AU-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 bottom of the antenna was used as the radiation source.

The distance used for the calculation was 15.8 meters. The antenna radiation center is located 18.3 meters above ground level. 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 0.004 mW/cm^2 at the target, corresponding to a contribution of 2.0 % 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 to the site, and excitation to the antenna is terminated 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 January xx, 2011.

Bernard R. Segal, P. E.
Maryland Registration # 25811

BERNARD R. SEGAL, P. E.
CONSULTING ENGINEER
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Engineering Exhibit
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