

TECHNICAL EXHIBIT
LPTV DISPLACEMENT APPLICATION FOR
STATION WKYV-LP (FACILITY ID. 68490)
RICHMOND, VIRGINIA
CH 45(+) 50 KW-DA

Technical Narrative

This technical exhibit supports a low power television (LPTV) displacement application from station WKYV-LP at Keysville, Virginia. Station WKYV-LP is currently authorized to operate on channel 61 with no carrier offset (BLTTL-19931020JI, Facility ID 68490). Station WKYV-LP qualifies for displacement due to its operation in the band from channel 60 through 69 per Section 73.3572 of the Federal Communications Commission (FCC) rules.

Proposed Facilities

Station WKYV-LP proposes to change frequency to channel 45 with a plus (+) carrier offset. It is proposed to relocate the transmitter site to an existing structure (FCC Antenna Registration No. 1015404) at Richmond, Virginia. The proposed transmitter site coordinates are 37-33-50, 77-27-31. A directional antenna (DA) system will be side-mounted on the structure. The proposed maximum visual effective radiated power (ERP) is 50 kW. The proposed antenna center of radiation is 146.3 meters above mean sea level (AMSL).

Analog (NTSC) Allocation Considerations

A study has been conducted with respect to other analog (NTSC) assignments using the allocation provisions contained in the FCC LPTV rules. The proposed WKYV-LP operation complies with the FCC's normal allocation standards (separation and non-overlapping contours) with all analog assignments except two petitions for rule making (PRM) for analog channel 52. One PRM is for channel 52 at Richmond, Virginia (BPRM-20000717ACH, Television Capitol Corporation or Richmond). The other PRM is for station WUPV-TV at Ashland, Virginia to change frequency from channel 65 to channel 52 (BPRM-20001103ACP, Bell Broadcasting, LLC).

Although consideration of these 2 PRMs may not be required at this time, interference calculations have been made using the procedures outlined in the FCC's OET-69 Bulletin with a 1 kilometer grid. The proposed WKYV-LP operation causes no interference (i.e., 0 population) within the analog service areas for the proposed Richmond channel 52 and WUPV-TV channel 52 operations. This interference level (0.0%) is well within the FCC's 0.5% acceptable interference threshold. If necessary, a waiver of the FCC rules is requested with respect to the Richmond channel 52 and WUPV-TV channel 52 PRMs based on use of the OET-69 methods.

DTV Allocation Considerations

Pertinent DTV allotments and assignments on channels 44, 45 and 46 have been examined using the procedures outlined in the FCC's OET-69 Bulletin.¹ The proposed WKYV-LP operation

¹ The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent

does not cause calculated interference to any known DTV assignment or allotment. If necessary, a waiver of the FCC rules is respectfully requested for interference calculations based on use of the procedures outlined in the FCC's OET-69 Bulletin.

Radiofrequency Electromagnetic Field Exposure

The proposed WKYV-LP facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. A visual ERP of 50 kW with 10% aural power was assumed. A relative field value of 0.3 was assumed for the Shively SLP16L1HSOD antenna's downward radiation. The calculated power density at a point 2 meters (6.6 feet) above ground level is 0.0101 mW/cm². This is less than 3% of the FCC's recommended limit of 0.44 mW/cm² on channel 45 for an "uncontrolled" environment. It is less than 1% of the FCC's limit for a "controlled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed WKYV-LP operation appears to be otherwise categorically excluded from environmental processing.

Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 1 km was employed. An Alpha based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin No. 69.

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