



**ATTACHMENT B**

**Technical Statement**

**Beam Tilt Protection**

du Treil, Lundin & Rackley, Inc.

TECHNICAL STATEMENT  
COSMOS BROADCASTING CORPORATION  
DTV BEAM TILT PROPOSAL

This technical statement was prepared on behalf of Cosmos Broadcasting Corporation (herein "Cosmos"), licensee of several full-service broadcast television stations. Cosmos is requesting reconsideration of the Federal Communications Commission's new rules to increase the effective radiated power within a UHF DTV station's service area through the use of antenna beam tilting. See Section 73.622(f)(4). Under the new rules, a UHF DTV station may request an increase in effective radiated power, up to 1,000 kilowatts, while maintaining the authorized field strength at the edge of the service contour. However, the field strengths at the edge of its service contour are to be calculated assuming one-decibel of additional antenna gain over the antenna gain specified by the manufacturer.

While Cosmos recognizes that the one-decibel of additional antenna gain would decrease the impact of interference to other stations due to tower deflections, it is not enough. As provided by example in the initial Technical Exhibit concerning this subject, an eleven-decibel increase in effective radiated power at the radio horizon could be caused by tower deflections.\* Using the new one-decibel of additional antenna gain rule, the possible increase in effective radiated power at the radio horizon by this example would only decrease to ten-decibels. Cosmos believes that the new one-decibel of additional antenna gain rule is only a marginal improvement

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\* See Cosmos Broadcasting Corporation DTV Beam Tilt Proposal Technical Exhibit, dated December 5, 1997.

and will not be sufficient in providing protection to other broadcast stations.

Cosmos is also concerned that the notification of stations possibly affected by beam tilting is not sufficient. Under the new rules, the Commission will require notification of potentially affected stations only if the minimum geographic spacing requirements in Section 73.623(d)(2) of the Rules are not satisfied to those stations. However, as the Commission is aware, these minimum distance separations are not based on interference free service. Therefore, Cosmos believes that the Commission should require notification of affected stations based on greater geographic spacing requirements.



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**ATTACHMENT C**

**Technical Statement**

**WFIE(DT) — Evansville, IN**

du Treil, Lundin & Rackley, Inc.

DTV CHANNEL SUBSTITUTION  
WFIE-TV EVANSVILLE, INDIANA

WFIE-TV on NTSC Channel 14 at Evansville, Indiana is requesting the substitution of the FCC assigned DTV channel. WFIE-TV is requesting DTV Channel 46 in lieu of the assigned DTV Channel 58. As previously noted, DTV Channel 46 at Evansville satisfies the Commission's minimum distance separation criteria of Section 73.622(d) to all stations except to three vacant NTSC allotments. Pursuant to the Commission's Public Notice, WFIE-TV is providing an analysis of the proposed substitution Channel considering OET Bulletin 69, "Longley-Rice Methodology for Evaluating TV Coverage and Interference."

Employing du Treil, Lundin & Rackley, Inc. interpretation of OET Bulletin 69, WFIE-TV on DTV Channel 46, employing replicated facilities, causes minimal new interference. Only 2,454 persons are expected to receive interference from the DTV operation of WFIE-TV to the DTV allotment of WDCN at Nashville, Tennessee on Channel 46. This is 0.2 percent of the population within the predicted DTV WDCN service area. With respect to the NTSC facility of WHSL at East St. Louis, Illinois on Channel 46, only 212 persons, or less than 0.01 percent of the current service area, are predicted to receive interference. With the DTV

allotment of WTHR at Indianapolis, Indiana on Channel 46, less than 10 persons, or again less than 0.01 percent of the DTV service area, are affected.

No interference calculations were performed toward three vacant NTSC allotments: Channel 46 at Paris, Illinois; Channel 48 at Owensboro, Kentucky; and Channel 61 at Owensboro. As discussed below, these vacant allotments should not prevent WFIE-TV from a DTV facility on Channel 46.

Channel 46 Paris, Illinois NTSC Allotment

Paris, Illinois presently has a vacant commercial NTSC Channel 46 allotment. According to the Commission's television engineering database, no applications for construction permit are pending for this allotment. It therefore appears that as the Commission will delete this vacant allotment, no interference protection is warranted.

Channel 48 Owensboro, Kentucky NTSC Allotment

At Owensboro, Kentucky, a vacant commercial allotment exists for NTSC Channel 48. Also pending are two applications for construction permit (BPCT-960722KL and BPCT-960920IV) for this allotment. The Owensboro allotment continues to also have a severe co-channel short-spacing to the DTV allotment at Bowling Green, Kentucky. The separation distance is only 86.4 kilometers. A large amount of interference would occur to both the Owensboro NTSC and Bowling Green DTV facilities with a short-spacing of this magnitude. Therefore, the vacant Channel 48 Owensboro, Kentucky NTSC allotment does not appear viable.

Channel 61 Owensboro, Kentucky NTSC Allotment

Another vacant commercial allotment exists on Channel 61 at Owensboro. According to the Commission's television engineering database, no applications for construction permit are pending for this allotment. This channel is also located outside of the "core-spectrum." It therefore appears that the Commission will delete this vacant allotment.



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