

Before the
Federal Communications Commission
Washington, D.C. 20554

In re Applications of

TED TUCKER AND File Nos. BMPFT-880329TA
JANA TUCKER BLFT-880512TD
San Manuel, Arizona

For Modification of Construction
Permit and License for FM
Broadcast Translator Station K285DL

MEMORANDUM OPINION AND ORDER

Adopted: March 16, 1989;

Released: April 17, 1989

By the Commission: Commissioner Quello dissenting in part, and issuing a statement.

1. The Commission has before it for consideration: (a) the above-captioned applications for modification of construction permit¹ (FCC Form 346) and for license for an FM broadcast translator station (FCC Form 347) filed by Ted Tucker and Jana Tucker (Tuckers);² (b) a petition for reconsideration filed May 25, 1988, by the Tucson Broadcasters Association (TBA);³ (c) an opposition filed June 8, 1988, by the Tuckers; (d) a reply filed June 20, 1988, by TBA; (e) a pleading entitled "Petition for Reconsideration/Petition to Deny" filed July 25, 1988, by Joel Wayne Russell and Frances R. Russell (Russells); and (f) a motion to strike filed August 2, 1988, by the Tuckers.

2. The initial application for FM translator station K285DL was filed November 3, 1986, by Coronado Broadcasting Corporation, licensee of station KAWV(FM) (formerly KHYT(FM)), Oracle, Arizona. The applicant proposed to serve San Manuel, Arizona, with the translator rebroadcasting the signal of station KAWV(FM).⁴ San Manuel is located within the 1 mV/m contour of station KAWV(FM), the primary station. However, due to intervening terrain features, reception of its signal there is inadequate. The unopposed application was granted on January 30, 1987. On March 29, 1988, the applicant filed an application to change from a directional to a non-directional antenna and reduce effective radiated power. The cover letter to the application advised that it was a minor change application and was therefore not subject to the freeze on acceptance of new or major change applications for commercial FM translator stations. It also noted that as a minor change application no fee was required. The application was not contested, and on April 25, 1988, was granted. The petitions for reconsideration of the April 25, 1988 grant followed.

The TBA Petition

3. 47 C.F.R. Section 1.106(b)(1) provides that a party seeking reconsideration who did not participate in the earlier stages of the proceeding must demonstrate how they are adversely affected by the action under reconsideration and show good reason why they were unable to

participate in the earlier stages of the proceeding. TBA comprises several full service FM radio stations serving Tucson, Arizona. Because the Tucker's translator, as modified, would directly compete with TBA member stations, TBA asserts that it will be adversely affected by the operation of that translator station. TBA further asserts that inasmuch as the Tucker's application to modify K285DL was granted four days after the release of a Public Notice announcing acceptance of the application, TBA did not have an opportunity to participate in the earlier stages of this proceeding. We believe that TBA has made the showing required per Section 1.106(b)(1) and therefore conclude that TBA has standing to file the instant petition for reconsideration.

4. TBA alleges that the March 29 amendment proposed substantial changes to the facilities authorized by the initial construction permit. TBA claims that under the rules this constitutes a major change and not a minor change as alleged by the applicant. According to TBA, the translator, as modified, would serve approximately 20 times the population as that located within the 1 mV/m contour of the primary station. This means that the translator station would serve 284,258 persons while the primary station's service area population is only 14,963. In addition, TBA asserts that the amendment increased the translator's 1 mV/m coverage area fourfold, from approximately 236 square miles to 992 square miles. Thus, the translator, which was granted authority to serve San Manuel, would now cover approximately 90% of Tucson. In TBA's view, the application to change the antenna system was clearly a major change application under the rules. As such, they contend it was unacceptable for filing because it was filed after the freeze was imposed on the acceptance of FM translator applications for new or major changes in facilities.⁵ In addition, TBA alleges that the modified proposal is "technically flawed" in several respects. More specifically TBA alleges the following deficiencies:

i) The modified proposal is mutually exclusive with an application filed by the Russells for a proposed new co-channel translator station to serve Tucson, Arizona.

ii) The modified proposal will cause interference to a proposed new co-channel FM broadcast station at Kearny, Arizona.

iii) The modified application violates Section 74.1235 in that it proposes the use of separate 10 watt outputs to feed a 4 bay antenna of which the horizontal and vertical elements may not be fed separately because each element of the antenna is used for both polarization components.

5. The Tuckers, in opposition, deny the allegations and assert that whether an application is a major change or not does not depend on the total size of the translator's proposed coverage area, the percentage change in the coverage area, the size of the proposed coverage area relative to the primary station's coverage area or the additional communities and areas which will fall within the proposed coverage area. According to the Tuckers a major change results only when a change is proposed in a translator's output channel or the community or area the translator is licensed to serve. In the Tuckers' view, their application did not involve any of these factors. The

Tuckers concede that station K285DL, as modified, will cause interference to the Russells' proposed new translator station. However, they counter that the Russells' proposal would cause interference to station K285DL's facilities as they existed prior to the March 29 amendment. In the Tuckers' view, this makes the Russells' application unacceptable for filing. Concerning the allegations of interference to a full service FM station, the Tuckers assert that TBA has not demonstrated that its modified facilities will cause interference as defined in the rules. In the event any interference is caused by the translator, the Tuckers represent that they will take such corrective action to eliminate the interference as the rules require. The Tuckers concede that their modified antenna proposal does not strictly conform to the rules. They assert, however, that the type of antenna system proposed is "well known to both the Commission and every competent consulting engineer" and complies with the limitations of the rules. The Tuckers assert that the application conforms to all Commission Rules. TBA, in reply, continues to object to the proposal.

6. 47 C.F.R. Section 73.3573(a)(1) concerns, in relevant part, the processing of FM translator station applications. It provides that any application proposing a change in output frequency, or authorized principal community or area is a major change application. Here, the Tucker's March 29, 1988, application to modify the facilities of station K285DL ostensibly proposed only to modify the antenna system. It did not explicitly propose a change in output frequency, principal community or area. It stands unrefuted on the record, however, that the proposed antenna modification would increase the station's coverage area fourfold and would increase the population served 20 times. In addition, the translator station's 1 mV/m contour would now cover 90% of Tucson, a community that it did not serve initially. The facilities proposed in the March 29 application substantially surpass the facilities authorized initially. The application proposed is clearly a major change and not a minor change as asserted by the applicant.

7. Ordinarily, in these circumstances, we would require the applicant to pay the filing fee for a major change application and place it on the next cut-off-list. Here, however, the application was filed on March 29, 1988, five days after our implementation of a freeze on the acceptance of applications for new commercial FM translator stations or for major changes in the facilities of existing commercial FM translator facilities.⁶ The application is, therefore subject to the freeze. This means that it is unacceptable for filing and will be returned.

8. We recognize that the imposition of the freeze on the acceptance of FM translator major change applications has created a need for greater clarity in the standards used to define major and minor changes. FM translators generally have limited service areas and are not required to place any particular signal strength contour over the community or area to be served. Indeed, not all translators are licensed to serve defined communities.⁷ Furthermore, very modest changes to the transmitting facilities of a translator, such as the replacement of an antenna or a slight shift in antenna location, will incidentally result in some change in the area served by the translator.⁸ A rigid insistence that there be absolutely no change in area would require that most if not all changes in the facilities of translators be treated as major changes. That result would be incongruent with our characterization of modi-

fications in the primary FM broadcast service and would serve no useful purpose. Clearly the language of Section 73.3573(a)(1) needs to be applied in a manner which will separate the inconsequential and unavoidable changes in area from the more substantial changes which warrant thorough scrutiny by the public and the Commission.

9. Therefore, for the purpose of administering proposals to modify the facilities of FM translators we will generally consider a proposal to be a minor change if at least 90% of the area within the proposed 1 mV/m contour is encompassed by the previously authorized 1 mV/m contour. This assumes, of course, that there is no change in output frequency or principal community. We believe that this approach will benefit all parties by enabling us to expeditiously dispose of applications involving insignificant and unavoidable changes in area and which are unlikely to affect the interests of other parties. Greater changes in area are, we believe, the result of deliberate design choices and should be treated as major changes.

10. Although dismissal of the Tuckers' March 29 application moots TBA's allegations concerning the proposal's technical deficiencies, TBA's petition raises a broader policy question. This question focuses on the types of antenna systems that can be used by FM translator stations, given advances in technology to achieve the power limitations set forth in Section 74.1235 of the rules.⁹ Recent proposals contemplate use of systems that make more efficient use of available equipment, which are consistent with the spirit and the purpose of the existing rules, but which are arguably beyond the scope of the rules. We will therefore take this opportunity to clarify the scope of Section 74.1235 with regard to the types of antenna systems that can be utilized for FM translator proposals to achieve the power limitations set forth in that section of the rules.

11. We will deal with two specific systems that are currently being proposed by applicants. The first of these is exemplified by the Tuckers' modification application. The Tuckers proposed to feed their circularly polarized antenna with a single transmission line powered by two separate 10 watt amplifiers. The second situation also involves the use of a single transmission line. The single line here receives its power output from a single amplifier and carries it to a power divider. The power divider then directs power to each of several antennas, all serving a different community, with each antenna receiving no more power than it would receive if a single amplifier with a single transmission line were being used. The problem is that Section 74.1235 does not contemplate combining power into a single transmission line. Nor does it appear to contemplate the use of a final radio frequency amplifier capable of producing more than the power output authorized by the rules.

12. The rule in fact is quite specific. Depending on the geographic location of an FM translator station's service area, a maximum of one or ten watts transmitter power output (TPO) of the final radio frequency (RF) amplifier may be fed to a single transmitting antenna. The TPO may also be divided between two or more transmitting antennas or arrays of antennas as long as a single feed is used to each antenna. The rule also provides that more than one radio frequency amplifier may be authorized in individual cases if each amplifier provides service to a different community. If more than one amplifier is used to provide service to the same community or area, the radiated fields from the separate antennas cannot combine

in any direction to attain an effective radiated power (ERP) in excess of that which would be produced by a single antenna fed by an amplifier operating at the authorized output power. Two amplifiers may also be used to serve the same community if one is used to feed an antenna producing a horizontally polarized signal and one is used to feed an antenna producing a vertically polarized signal. Thus, the rule requires each antenna or antenna array to be fed by a single RF amplifier with a power output no greater than the maximum authorized using a single transmission line.

13. The Tuckers proposed to use a single circularly polarized antenna, which would produce signals in both vertical and horizontal planes and to feed this one antenna with a single transmission line. Reading the rule literally, TBA contends that the Tuckers could not use an antenna that has integrated horizontal and vertical elements since it would not be possible to feed each plane separately. TBA further contends that the 20 watts TPO to be used to feed the single antenna was in excess of the 10 watts allowed by the rules, and therefore was prohibited.

14. Under the circumstances described by TBA it has been our practice to permit a single feed with double the transmitting output power otherwise allowed. This is so because the effect is no different than if separate feeds were used to serve separate antennas, one producing a horizontally polarized signal and the other producing a vertically polarized signal. In the case of a dual plane polarized antenna, the antenna gain factor, or multiplier, for each plane is one half that of a single plane polarized antenna. Hence, if only a 10 watt TPO feed were used, the equivalent antenna output power and attendant coverage would be half that of an equal size single plane polarized antenna. Thus, a feed with twice the authorized TPO is allowed to feed a circularly polarized antenna comprised of integrated vertical and horizontal elements on the single antenna since the net result is equivalent antenna output power. This approach accommodates the use of more technically advanced equipment and is a more economical and efficient means of providing coverage to an authorized service area, but does not undermine the intent of the rule.

15. Section 74.1235 also provides that if multiple antennas or antenna arrays are used to serve separate communities, each must have a single amplifier of no more than 1 or 10 watts and each must use a separate transmission line to feed each transmitting antenna. Theoretically, this means that a proposal to serve two different communities using two different directional antennas would require two amplifiers and two separate feeds. However, we see no inconsistency with the rules to allow a single amplifier in excess of 1 or 10 watts and a single transmission line to feed multiple antennas. Numerous applicants have shown that this can be accomplished by locating a power divider on the tower. The power divider takes the incoming power and divides it proportionately to supply each antenna with no more than its authorized power (one or ten watts, as appropriate). Although the output power of the final frequency amplifier is in excess of that permitted by the rules, these proposals are technically more efficient and comply substantially with the rule since no more than the authorized power is utilized by any one antenna. Accordingly, we will process and grant applications containing these proposals as being in conformance with the rules and therefore not requiring a waiver.

16. We wish to stress that these interpretations of the rules reflect current practice and are not a predetermination of new standards that might be adopted in light of our comprehensive Notice of Inquiry (NOI) on the role of the FM translator service.¹⁰ Until we evaluate the comments filed in that NOI and adopt new rules, if any, we will continue to process applications consistent with current practices. It is the responsibility of the applicants to demonstrate that their proposals conform with the power limitation of the rule. It must also be shown that any non-conforming technical proposal will not cause interference to any regularly used off-the-air signal of any authorized broadcast station and otherwise conforms to all the rules concerning FM translator stations.

The Russell Petition

17. The Russell's contend that the Tucker's modification of K285DL will interfere with the new translator station proposed by the Russell's in application File No. BPFT-880301TB which was filed almost one month prior to the filing of the Tucker's modification application. The Russell's thus request reconsideration of the grant of the construction permit to modify K285DL and denial of the application for license to cover the construction permit. We note that as a petition for reconsideration, the Russell pleading is untimely since it was filed almost two months after the deadline for filing petitions for reconsideration in this proceeding. The Russells have offered no explanation as to why this pleading is untimely or, for that matter, why they were unable to participate in the earlier stages of this proceeding pursuant to 47 C.F.R. Sections 1.106(b) and (f). Accordingly, the petition for reconsideration is procedurally defective and will be dismissed. Furthermore, 47 U.S.C. Section 319(c) excludes applications for license to cover construction permits from those applications against which a petition to deny may be filed. Accordingly, as a petition to deny, the Russell pleading is also procedurally defective and will be dismissed. Furthermore, the application for license to cover construction permit BMPFT-880329TA was amended on June 13, 1988, to specify construction permit BMPFT-861103TD as the authorization for which a license to cover is being sought. Because the Russell's have no objection to grant of a license to cover BPFT-861103TD, their pleading, when treated as an informal objection to grant of the license application, is moot.

18. Accordingly, for the reasons stated herein, the petition for reconsideration filed by the Tuscon Broadcasters Association IS GRANTED to the extent set forth above and in all other respects IS DISMISSED as moot; the petition for reconsideration/petition to deny filed by Joel Wayne Russell and Frances R. Russell IS DISMISSED; the grant of construction permit BMPFT-880329TA IS RESCINDED and application File No. BMPFT-880329TA IS RETURNED as unacceptable for filing pursuant to the freeze on acceptance for filing of applications for new or major changes to the facilities of commercial FM translator stations; and the license application (BLFT-880512TD), as amended, to cover construction permit BPFT-861103TD IS GRANTED.

FEDERAL COMMUNICATIONS COMMISSION

Donna R. Searcy
Secretary

FOOTNOTES

¹ The modification application was filed by Coronado Broadcasting Corporation. Subsequently the Corporation was dissolved and the permit for station K285DL, pursuant to Commission consent, was assigned to the stockholders, Ted Tucker (50%) and Jana Tucker (50%) (BAPFT-880421TB granted May 6, 1988).

² The license application was originally filed to cover the construction permit as modified by BMPFT-880329TA. It was subsequently amended to cover the original construction permit BPFT-861103TD.

³ The Tucson stations joining in the filing of this petition are KJYK(FM), KWFM(FM), KROQ(FM) and KLPX(FM).

⁴ FM translator stations are low power secondary service broadcast stations. They retransmit the signals of an FM radio broadcast station or another FM broadcast translator station without significantly altering any characteristics of the incoming signal other than its frequency and amplitude. They are intended to provide FM broadcast service to areas and populations which are unable to receive satisfactory service by reason of distance or intervening terrain obstructions. See *Report and Order, Amendment of Part 74 of the Commission's Rules and Regulations to Permit the Operation of Low Power FM Broadcasting Translator and Booster Stations*, 20 Rad. Reg. 2d (P&F) 1538 (1970). FM translators are authorized without regard to the FM table of allotments. They are permitted to operate only where they cause no interference to the direct reception by the public of the off-the-air signal of any authorized broadcast station, including Class D noncommercial educational FM stations. See generally 47 CFR 74.1200, *et seq.* (1988).

⁵ See *Public Notice, Freeze Imposed on Filing of Applications for New FM Translator Stations*, Mimeo 2249, released March 24, 1988.

⁶ See n.5, *supra*.

⁷ See, for example, station K224BM, Rural Utah County, Utah.

⁸ The 1 mV/m contour is commonly used in the estimation of coverage and is used, when appropriate, for processing FM translator applications.

⁹ Section 74.1235, in part, states:

(a) The power output of the final radio frequency amplifier of an FM translator shall not exceed 10 watts, except that FM broadcast translator stations serving areas east of the Mississippi River or in Zone I-A shall be limited to 1 watt. This power may be fed into a single transmitting antenna or may be divided between two or more transmitting antennas or arrays of antennas in any manner found useful or desirable by the licensee. In individual cases, the Commission may authorize the use of more than one final radio frequency amplifier at a single station under the following conditions:

(1) Each such amplifier shall be used to serve a different community or area. More than one final radio frequency amplifier shall not be authorized to provide service to all or part of the same community or area, except as provided in paragraph (a)(2) of this section.

(2) The transmitting antennas or antennas arrays shall be so designed and installed that the radiated fields from the separate antennas shall not combine in any direction in any single plane of polarization to achieve the effect of radiated power in excess of that which would be produced by a single antenna or antenna array fed by a radio frequency amplifier with power output no greater than that authorized pursuant to paragraph (a) of this section. Two radio frequency amplifiers may be used to serve the same community if one is used to feed an antenna designed to produce a horizontally polarized signal, and the other a vertically polarized signal.

¹⁰ *Notice of Inquiry, Amendment of Part 74 of the Commission's Rules Concerning FM Translator Stations*, 3 FCC Rcd. 3664 (1988).

SEPARATE STATEMENT
OF
COMMISSIONER JAMES H. QUELLO
DISSENTING IN PART

In re: Applications of Ted Tucker and Jana Tucker, San Manuel, Arizona

I support the majority's decision that the application constitutes a major change. As the majority correctly note, the proposed modification would increase the station's coverage area fourfold and would increase the population served 20 times. The proposed facilities would substantially exceed those authorized. Because the application was filed after we imposed our freeze on acceptance of new commercial translators, it is an unacceptable major change subject to the freeze.

I must disagree, however, with the decision to consider a 10% change in a translator's service area as a minor change, *per se*. Instead, the Commission should examine each proposal to determine whether the change is insubstantial or unavoidable. Such an analysis would be particularly appropriate where a 10% increase in coverage is directed towards areas already served by full service facilities. Given the disposition of the application in this case, there is no need to address the broader policy issues concerning single or multiple transmission lines that serve multiple antennas. Technical questions relating to Section 74.1235 of the rules are better left to our comprehensive examination of translator policies. *Notice of Inquiry* in MM Docket No. 88-140, Amendment of Part 74 of the Commission's Rules concerning FM Translator Stations, 3 FCC Rcd 3664 (1988). Accordingly, I dissent in part to the Commission's decision.