

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

| | | |
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| In the Matter of |) | |
| |) | |
| Amendments of Parts 73 and 74 to Improve the Low Power FM Radio Service Technical Rules |) | MB Docket No. 19-193 |
| |) | |
| Modernization of Media Regulation Initiative |) | MB Docket No. 17-105 |

***EX PARTE* COMMENTS OF ABC, INC.**

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***EX PARTE* COMMENTS OF ABC, INC.**

ABC, Inc. (“ABC”), licensee of full-power digital television station WPVI-TV, channel 6, Philadelphia, Pennsylvania (“WPVI”), by its attorneys, submits these *ex parte* comments in the above-captioned proceeding in which the Federal Communications Commission (“FCC” or “Commission”) proposes to sunset the interference protections afforded to channel 6 television stations under Sections 73.525 and 73.825 of the FCC’s rules (“Channel 6 Protections”).¹

Summary

As explained herein, elimination of the Channel 6 Protections is contrary to the public interest because there is insufficient evidence to demonstrate that full-power television stations will be adequately protected in the absence of such rules. Indeed, the primary study on which the Commission relies to support its conclusion is over twelve years old and uses measurement data that does not reflect real-world operating conditions. WPVI, for example, has first-hand experience with the challenges of broadcasting on digital channel 6, as a large portion of its former analog over-the-air viewers lost service at the time of the digital transition. More than ten years later, many of WPVI’s viewers in the densely populated areas in and around Philadelphia

¹ See *In the Matter of Amendments of Parts 73 and 74 to Improve the Low Power FM Radio Service Technical Rules*, MB Docket Nos. 19-193, 17-105, Notice of Proposed Rulemaking, paras. 8-12 (rel. July 30, 2019) (“NPRM”).

still are either unable to receive any signal from WPVI or receive a poor signal that inhibits their ability to watch WPVI's high-quality programming. This experience, and the dearth of evidence in the record that DTV receivers on the market today are less susceptible to interference from FM stations, demonstrate that it would not be prudent to adopt the proposal to sunset the Channel 6 Protections at this time, especially because the number of viewers that rely on over-the-air service is increasing. In the absence of compelling data based upon real-world signal strength measurements, the FCC should not eliminate the Channel 6 Protections afforded to full-power television stations, particularly because retention of the long-standing Channel 6 Protections does not impose a significant burden on FM stations operating in the reserved bands.

I. THE RECORD DOES NOT SUPPORT THE PROPOSED SUNSET OF THE CHANNEL 6 PROTECTIONS FOR FULL-POWER TELEVISION STATIONS

A. The data submitted by NPR over a decade ago is based on signal strength measurements that do not reflect real-world operating conditions

In the NRPM, the Commission tentatively relies on conclusions reached by National Public Radio ("NPR") over twelve years ago that digital television receivers are much less susceptible to FM interference than analog receivers.² As an initial matter, the outdated NPR studies relied on assumptions regarding digital signal strength that have proven to be incorrect.³ Notably, even under these flawed assumptions, the NPR studies demonstrated that a FM station

² NRPM at para. 10.

³ Specifically, the NPR studies used signal strength measurements that were much stronger than actual channel 6 digital signals to reach the conclusion that Channel 6 Protections are not required. For example, the lowest signal strength measured in the NPR studies is equivalent to a signal strength of about 43 dbU, which is 15 dB *above* the 28 dbU noise-limited protected contour of a full-power channel 6 station. The FM to DTV6 interference potential increases and becomes more severe when digital signal strengths below 43 dBu are encountered in a channel 6 television station's protected service area. Thus, because they rely on stronger signal strengths than can be achieved in real-world conditions, the NPR studies do not demonstrate that FM to DTV6 interference is not of concern in the digital broadcasting era. *See* Statement of Carl T. Jones Corporation at 2-3, attached hereto as Attachment A ("Engineering Statement").

operating on a reserved band channel could, in fact, cause substantial interference to channel 6 digital receivers.⁴ The NPR studies did not justify elimination of the Channel 6 Protections when submitted in 2008⁵ and certainly do not justify repeal of the Channel 6 Protections over a decade later. It would be premature and arbitrary to take any actions to reduce or eliminate protection of the channel 6 full-power television service in the absence of studies of the behavior of DTV receivers relative to various interfering FM signal strengths using input signal levels that accurately reflect real-world conditions.

B. The engineering statement submitted by NPR in this proceeding does not support elimination of the Channel 6 Protections

In support of its renewed efforts to eliminate the Channel 6 Protections in the instant proceeding, NPR supplied an engineering statement (“Cavell Statement”) in which Cavell, Mertz & Associates concluded, without analysis, that the results of the NPR studies undertaken prior to the digital transition are valid today.⁶ The conclusion in the Cavell Statement that the NPR studies support elimination of the Channel 6 Protections should be disregarded, as the underlying factors supporting this conclusion are flawed.

First, the Cavell Statement states that, since the time the NPR studies were conducted, DTV tuners have “undergone continued generational development” and observes that

⁴ See Engineering Statement at 2. The NPR studies revealed FM to DTV6 interference in multiple use scenarios, and illustrated that the potential for interference increases when signal levels below 43 dBu are encountered in a channel 6 television station’s protected contour. This was the case even though the signal strengths used by NPR Labs were much stronger than those in the real-world operating environment. In short, the NPR studies demonstrate that the risk of FM to DTV6 interference is real, such that the Channel 6 Protections must be maintained for full-power television stations. See Engineering Statement at 2-3.

⁵ See Comments of ABC, Inc., *In the Matter of Petition for Rulemaking of National Public Radio to Repeal Section 73.525 of the Commission’s Rules*, RM-11579 (submitted Dec. 2, 2009) (“*Section 73.525 Comments*”). ABC, Inc. incorporates by reference the Section 73.525 Comments into the instant proceeding.

⁶ See Engineering Statement of Cavell, Mertz & Associates, Inc. (Oct. 21, 2019) (attached as Attachment A to Comments of NPR).

manufacturers have improved digital tuners so as to mitigate the risk of FM to channel 6 interference.⁷ The mere fact that DTV tuners have evolved does not automatically mean that the potential for FM to digital channel 6 interference has been mitigated, nor does it consider the variety and age of DTV receivers actually used by viewers.⁸ Notably, the Cavell Statement does not provide any documentation or evidence to support its observations but instead simply assumes that, because there have been technological improvements in DTV receivers over time, the NPR studies continue to be valid today. The Commission should not eliminate full-power Channel 6 Protections on the basis of speculation and assumptions. Indeed, as the Cavell Statement acknowledges, the interference performance of digital receivers in the market today has not been studied.⁹

Second, the Cavell Statement states that “the NPR Studies demonstrated a radical reduction in the potential for TV6 interference.”¹⁰ This factor should be disregarded as circular because the statement relies on data in the NPR studies to prove that the NPR studies continue to be valid today. Even assuming such circular logic is appropriate, as explained above, the NPR studies fail to demonstrate a reduction of FM to digital channel 6 interference based on real-world conditions.

⁷ Cavell Statement at 2.

⁸ It is likely that viewers today rely on a wide range of DTV receivers, including older DTV receivers like those made available at the time of the digital transition. The Cavell Statement does not take this into account but instead appears to assume that all viewers will have transitioned to newer DTV receiver models. Even if it is the case that DTV receivers have improved over time, any household that relies on an earlier generation receiver would not benefit from developments in receiver technology. It would not be in the public interest to eliminate the Channel 6 Protections based upon the mere existence of newer DTV receivers, especially because there is no easy way to quantify the number or types of older generation DTV receivers in use today.

⁹ *Id.*

¹⁰ *Id.*

Finally, while ABC agrees that there have been no new studies of digital receiver performance relative to FM to channel 6 interference since the NPR studies, the lack of engineering studies does not support the conclusion that the NPR studies are still valid but rather favors the opposite approach – retention of the Channel 6 Protections. Without digital receiver studies that take into account real-world signal strengths and operating conditions, it would be premature to sunset full-power Channel 6 Protections at this time. This is particularly the case given that, at its root, the problem with digital channel 6 television reception stems not just from DTV receiver technology but from the fact that the ATSC standard simply did not sufficiently take into account real-world conditions like terrain and building penetration.¹¹

C. The data supplied by REC Networks in its petition for rulemaking does not demonstrate that elimination of full-power Channel 6 Protections is necessary to improve LPFM service

The instant rulemaking is the result of a petition for rulemaking filed by REC Networks (“REC”) in which REC requests that the FCC take certain actions designed to improve the LPFM service.¹² While REC urges the FCC to modify the Channel 6 Protection rules, its concern is not with full-power television stations but rather with the “overprotection” of channel 6 LPTV stations under Section 73.825 of the FCC’s rules.¹³ To this end, REC’s request for modification was limited to Section 73.825 and supported by an analysis of the service contours

¹¹ See, e.g., “Record of Test Results of the Grand Alliance System,” Advanced Television Test Center, submitted to the FCC Advisory Committee on Advanced Television Service October 1995, Section VII, page VII-2 (explaining that no conclusion regarding the “performance reliability of digital television broadcasting on VHF channels” could be reached without additional field testing due, in part, to digital channel 6 interference problems during field tests conducted prior to the digital television transition). The ATSC digital television standard adopted by the Commission, which remains the standard today, was based upon the Grand Alliance System. See, e.g., *In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Docket No. 87-268, Fourth Report and Order, para. 4 (1997).

¹² See Petition for Rulemaking of REC Networks, RM-11810 (June 13, 2018).

¹³ See *id.* at para. 45.

of channel 6 LPTV stations. As the Commission acknowledges, nowhere in its petition for rulemaking does REC specifically address full-power channel 6 television stations.¹⁴

Elimination of the full-power Channel 6 Protections based upon an analysis of LPTV stations would be arbitrary and speculative, where, as here, the data regarding digital receiver performance is flawed. Accordingly, any action in this proceeding should be narrowly tailored to address the specific concern raised by REC, namely, how best to mitigate the risk that LPTV stations are overprotected from LPFM interference.¹⁵

D. Blanket statements that the Channel 6 Protections are no longer required do not justify sunset of Sections 73.525 and 73.825

The record in this proceeding supporting sunset of the Channel 6 Protections is primarily based upon blanket statements that the Channel 6 Protections are no longer required.¹⁶ These conclusory observations do not provide actual evidence demonstrating that the full-power Channel 6 Protections are unnecessary. Indeed, there are number of factors that must be considered when evaluating potential interference from FM reserved band stations to full-power channel 6 digital television stations, including the proximity of a FM station to a nearby digital television station's transmitting antenna, the power output of the FM station in relation to the power output of the applicable digital television station, and whether FM station's antenna pattern presents "hot spots" that could adversely affect certain digital receivers within the FM

¹⁴ See NPRM at para. 9.

¹⁵ See *infra* at Section IV (explaining that this proceeding is limited to measures designed to improve the LPFM service). ABC does not take a position as to REC's claims that LPTV stations are overprotected, nor is it addressing the merits of REC's proposed modifications to Section 73.825 other than to note that any changes to Section 73.825 should not apply to full-power channel 6 television stations that are entitled to interference protection from the secondary LPFM service.

¹⁶ See, e.g., Comments of REC Networks, at para. 96 (asserting that the Channel 6 Protections are not necessary because they were developed based on analog tuners); Comments of Hope Christian Church, at para. 4 (observing that the fact that the FCC allows adjacent DTV channels to be used in the same market proves that the Channel 6 Protections are not needed).

contour. In the absence of a complete and thorough understanding of how these and other factors would impact full-power channel 6 television stations if the Channel 6 Protections are eliminated, the FCC should refrain from repealing the rules.

II. RETENTION OF CHANNEL 6 PROTECTIONS FOR FULL-POWER TELEVISION STATIONS DOES NOT IMPOSE A SUBSTANTIAL BURDEN ON FM RESERVED BAND STATIONS

Under the current Channel 6 Protection rules, a LPFM station must satisfy minimum separation distances designed to protect full-power channel 6 television stations from interference.¹⁷ Similarly, a FM reserved band station must protect full-power channel 6 stations and, to facilitate such protection, must notify affected channel 6 television stations of a proposal for a modified or new NCE-FM facility on channels 201 through 220.¹⁸ The Channel 6 Protection rules have functioned quite well to protect full-power television stations from interference, and have done so without imposing significant burdens on FM reserved band stations.¹⁹ Indeed, there are only ten full-power digital television stations licensed to operate on digital channel 6, such that the universe of affected full-power stations subject to protection is quite small.

In addition, with respect to NCE-FM stations, the notification requirements as applied to full-power television stations are not unduly burdensome but instead provide full-power stations with an efficient means to evaluate proposals that might impact their viewers. Notably, when a full-power station receives notification of a NCE-FM proposal, it is the full-power station, and not the NCE-FM station, that incurs the cost of conducting a study of predicted interference.²⁰

¹⁷ See 47 C.F.R. § 73.825.

¹⁸ See, e.g., 47 C.F.R. § 73.525(b)(4).

¹⁹ Engineering Statement at 3-4.

²⁰ Engineering Statement at 3.

And, in only a few cases have NCE-FM stations been requested to modify a proposal to resolve interference.²¹ In other words, the Channel 6 Protection rules are working as intended to protect full-power channel 6 stations.

By contrast, sunset of the Channel 6 Protections would shift the burden to full-power channel 6 television stations to guard against FM reserved band interference within their protected contours. Without the minimum separation requirements set forth in Section 73.825 and the protections and notice requirements afforded by Section 73.525, a full-power channel 6 television station would be required to affirmatively monitor FCC filings for FM reserved band proposals to determine whether such proposals would have a negative impact on channel 6 television viewers.²² Moreover, in the absence of the current rules, FM reserved band stations would have little incentive to cooperate with affected channel 6 full-power television stations in the event predicted interference is identified.²³ The potential burden on full-power channel 6 stations to affirmatively protect their contours from interference in the absence of the Channel 6 Protections is quite significant given the large number of FM reserved band stations presently authorized, and this number is only going to increase.²⁴ Requiring full-power channel 6 television stations to go on the offensive to guard their protected contours is not in the public interest, particularly because stations like WPVI have yet to recover all of the former over-the-air

²¹ *Id.*

²² This is concerning with respect to LPFM stations because they operate on a secondary basis. Full-power channel 6 television stations should not be placed in a position of having to monitor their protected contours against interference from a secondary service that, under FCC rules, bears the burden of operating on an interference-free basis.

²³ Engineering Statement at 4. One commenter has suggested that Section 73.318 adequately protects channel 6 television stations, such that elimination of the Channel 6 Protections would be of little consequence. *See* Comments of Four Community Rivers Broadcasting Corporation, et al, at paras. 6-7. This is not the case. *See* Engineering Statement at 5 (explaining that Section 73.318 is irrelevant to protection of full-power channel 6 television stations).

²⁴ *See* Engineering Statement at 4-5 (“Some in the broadcast industry envision a flood of applications for new LPFM stations and FM translators.”).

analog viewers lost at the time of the DTV transition while simultaneously seeking to provide service to an increasing number of over-the-air viewers.

III. ELIMINATION OF THE CHANNEL 6 PROTECTIONS FOR FULL-POWER STATIONS IS CONTRARY TO THE PUBLIC INTEREST

In the absence of Channel 6 Protections, the full power television contours that the FCC has expended considerable resources protecting in order to ensure that viewers have ongoing access to over-the-air broadcast television would be put at risk. Such a result is contrary to the public interest, especially given the growth in over-the-air viewership over the past several years.

A. Elimination of the Channel 6 Protections for full-power television stations contravenes the FCC’s long-standing goal of ensuring continuity of over-the-air television service

The FCC has consistently sought to ensure that viewers have access to free, over-the-air broadcast television. For example, at the time of the DTV transition, the Commission allotted digital television channels designed to replicate analog coverage in order to meet its goal of ensuring that viewers would “continue to have access to the stations that they are accustomed to receiving over the air.”²⁵ Despite the FCC’s efforts, viewers of stations on low-VHF channels, including channel 6, suffered significant digital reception problems. WPVI, for example, received a very large volume of calls from viewers that could no longer receive a channel 6 digital signal following the June 2009 cessation of analog broadcasts.²⁶ WPVI has been working closely with FCC staff since 2009 to resolve channel 6 reception problems and restore over-the-air service to its former analog viewers, notwithstanding that it faces an uphill battle due to the

²⁵ *In the Matter of Second Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television*, MB Docket No. 03-15, Report and Order, para. 72 (2004).

²⁶ WPVI’s challenges with the digital transition have been well-documented. *See, e.g.*, Comments of The Walt Disney Company, *In the Matter of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, MB Docket No. 12-268, pages 9-11 (filed Jan. 25, 2013).

inferior technical characteristics of digital channel 6 (e.g., propagation characteristics, terrain variations, woefully inadequate ERP levels, other anomalies and incumbent noise levels associated with the low-VHF band).²⁷ Over a decade after the DTV transition, certain of WPVI's viewers still experience significant difficulties with digital over-the-air reception.²⁸ Elimination of the Channel 6 Protections afforded to full-power stations would subject WPVI to potential interference from FM reserved band stations, thereby further eroding WPVI's ability to recapture viewers lost in the DTV transition and reach its audience with a free, over-the-air digital signal. Such a result contravenes the public interest and the Commission's goal of maintaining viewers'

²⁷ Although only a few full-power television stations broadcast digitally on channel 6, those television stations that selected channel 6 for their post-transition broadcasts did so after careful consideration of the alternative channel options. In many cases, channel 6 was the only available channel by which television stations believed they could reach their former analog over-the-air viewers while still complying with the Commission's rules regarding interference and other technical matters. For example, WPVI struggled to find a channel that would permit it to reach its viewers and, reluctantly, chose channel 6, despite well-documented technical concerns about the channel's post-transition feasibility. ABC has explained the factors that it considered when selecting channel 6 for WPVI's post-transition operations in multiple pleadings filed with the Commission. *See, e.g.,* Comments of ABC, Inc., MB Docket 07-294, *et al*, 2-4 (filed July 30, 2008). Although choosing channel 6 likely involved certain tradeoffs, television stations electing channel 6 likely did not contemplate that one such trade-off would involve the loss of protection from interference from FM reserved band signals as required by the Channel 6 Protection rules.

²⁸ For example, although WPVI's digital signal is receivable by viewers utilizing indoor antennas, it does not adequately penetrate the masonry construction in large apartment buildings and condominiums in the city of Philadelphia. Thus, while a viewer residing in an apartment located on the side of a building that faces the WPVI transmitter site can receive WPVI's signal using a window-placed antenna, a viewer residing on the opposite side of the building (i.e., the side of the building where the viewer's home does not face the transmitter site) cannot receive a digital signal because it does not penetrate the building. WPVI sought to address this and other reception issues by temporarily increasing its authorized power but ultimately concluded that the power increase did not, in fact, alleviate the significant reception challenges experienced by WPVI's viewers in densely populated areas of Philadelphia. Indeed, field studies recently conducted by the station to inform potential solutions to the ongoing reception problems demonstrated that over thirty percent of WPVI's viewers in densely populated areas in and near Philadelphia could not receive WPVI's over-the-air signal or suffered poor reception, as compared to WPVI's competitors, all of which transmit a digital over-the-air UHF signal that was receivable by approximately 90% or more of the residences included in the field study.

access to free over-the-air broadcast television – a goal that has been reiterated most recently in the context of the broadcast incentive auction.²⁹

B. The Channel 6 Protections continue to provide full-power television stations with much-needed interference protection as over-the-air viewership continues to rise

It has been posited that the Channel 6 Protections are no longer required because the rule does not take into account that viewers watch television via means other than over-the-air.³⁰ This argument must be rejected because the number of households that rely on over-the-air viewership is increasing. As a result, the challenges associated with over-the-air reception of digital channel 6 is becoming more, rather than less, problematic for WPVI. For example, in Philadelphia, as of October 2019, 10.6% of television households relied on over-the-air service, as compared to 6.5% in 2015.³¹ Over-the-air penetration within the metro area of Philadelphia – the very area that faces the most difficulty with reception of WPVI’s digital signal – is significantly higher, with an estimated 59% of households reporting that they use an antenna to watch broadcast television for free.³² Notably, 58% of households that use an antenna to receive over-the-air service in Philadelphia fall within an area where WPVI’s digital signal is weak, such that viewers in these areas either cannot receive, or suffer poor reception of, WPVI’s channel 6 digital signal.

²⁹ See, e.g., *In the Matter of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, GN Docket No. 12-268, Report and Order, para. 119, (June 2014) (concluding that the Spectrum Act requires the FCC to “protect [repacked] stations’ existing coverage areas, and interpret[ing] “population served” to mean the specific viewers who had predicted access to a station’s signal”).

³⁰ See, e.g., Comments of NPR, at page 5; Comments of Four Rivers Community Broadcasting Corporation, et al, at para. 4.

³¹ Source: Nielson.

³² Data based on a 2019 survey conducted by SmithGeiger of households that use an antenna to watch over-the-air television free of charge.

In light of the significant number of households in Philadelphia that rely on over-the-air service, and the fact that growth in over-the-air viewership has been consistently trending upwards over the past several years,³³ it is imperative that the Commission refrain from any action that would further impede WPVI's ability to meet its viewers' growing desire for reliable, interference-free digital over-the-air service. This is the case particularly because WPVI has not yet been able to resolve fully the digital reception issues that have been plaguing it since the DTV transition in 2009.

IV. IF THE FCC CONCLUDES THAT SOME MODIFICATIONS TO THE CHANNEL 6 PROTECTIONS ARE NECESSARY TO IMPROVE LPFM SERVICE, IT SHOULD NOT TAKE ANY ACTION WITH RESPECT TO SECTION 73.525 IN THIS PROCEEDING

The Commission's proposal to sunset Section 73.525 of its rules goes well beyond the scope of the instant proceeding, the purpose of which is "to improve LPFM reception and to increase flexibility in siting".³⁴ Section 73.525 simply is inapplicable to the LPFM service. The rule applies to "applications for construction permits for new or modified facilities for a NCE-FM station on channels 200-220" and, as such, establishes the interference environment between NCE-FM stations and channel 6 television stations. Because LPFM stations do not fall within the scope of Section 73.525, sunset of Section 73.525 will do nothing to advance the FCC's stated goal of improving LPFM reception. Thus, if the Commission is inclined to modify the Channel 6 Protections in order to improve LPFM service, it should narrowly tailor its action to address the specific concerns of LPFM broadcasters, namely, the scope of protection afforded to

³³ See, e.g., National ADS, Wired-Cable & Broadcast Only Household Penetration Trends, *available at* <https://www.tvb.org/Default.aspx?TabID=1554> (last visited Mar. 4, 2020). (showing an increase in broadcast-only households from just over 9% in February 2012 to in excess of 15% in February 2020).

³⁴ NPRM at para. 1.

LPTV stations under Section 73.825.³⁵ Repeal or modification of Section 73.525 should not be undertaken in this rulemaking as it has not produced a full and complete record (including current studies of FM to digital channel 6 interference) on whether current Section 73.525 should be maintained.

V. CONCLUSION

For the reasons set forth above, the Commission should not adopt its proposal to sunset Sections 73.525 and 73.825 of its rules. Elimination of the Channel 6 Protections afforded to full-power digital channel 6 television stations would constitute just another obstacle impeding the ability of stations like WPVI to reach viewers with a reliable over-the-air digital signal.

Respectfully submitted,

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March 9, 2020

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³⁵ See *infra* at Section I.C (discussing specific concerns raised in REC's petition for rulemaking).

**Attachment A:
Engineering Statement**



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF COMMENTS ADDRESSING
A NOTICE OF PROPOSED RULEMAKING
REGARDING PROTECTION FROM FM INTERFERENCE
FOR TELEVISION STATIONS OPERATING ON CHANNEL 6
WPVI-TV - PHILADELPHIA, PENNSYLVANIA
CH. 6 - 34 kW - 330 meters HAAT**

Prepared for: ABC, INC.

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, No. 7418, and in New York State, No. 63418.

GENERAL

This office has been authorized by ABC, INC., Licensee of WPVI-TV, channel 6, Philadelphia, Pennsylvania, to prepare this statement in support of comments regarding an FCC proposal to "...eliminate TV6 protections entirely on July 13, 2021." This proposal is contained in the NPRM in FCC 19-74, under heading B. Protecting Channel 6 Television Stations, paragraph 8. In paragraph 10 the FCC states "We tentatively accept NPR's conclusion that digital television receivers including digital-to-analog converter boxes are substantially less vulnerable to FM-induced TV6 interference than analog sets, but we seek comment on whether this conclusion is still valid after so many additional years of experience with digital broadcasts." In footnote 44 it is stated: "On FM channel 201, the lowest FM channel, NPR measured digital interference area 45 percent the size of that for analog equipment (2531 square kilometers versus 5601 square kilometers)."

COMMENTS ON THE NPR REPORTS

According to its own study, "Comparison of FM Broadcast Signal Interference Areas with Current Digital Television Receivers on Channel 6 to Analog TV Receivers Assumed in 47 CFR 73.525" dated September 5, 2008, NPR reveals that a hypothetical station on FM channel 201 that is located within the DTV6 TV station's 28 dB μ protected contour can cause an area of interference to digital TV receivers as large as 2531 square kilometers. The eleven+ year old NPR Report calculated interference areas for two DTV6 signal levels, the 28 dB μ protected contour and a 59 dB μ contour considered to be the lowest signal limit for indoor reception. The report also used three reserved band channels: 201, 209 and 219 as the hypothetical interfering channels. The study results shown in Table 1, reveal areas of predicted interference in all six instances. The interference areas based on FM channel 201 range from 2531 square kilometers within the 28 dB μ contour to 321 square kilometers within the 59 dB μ contour. The areas predicted for FM channel 209 range from 69 sq. km. to 10 sq. km. Areas predicted for FM channel 219 range from 40 sq. km. to 7 sq. km. For DTV6 stations these results support the necessity of maintaining the protections in Section 73.525 from NCE-FM stations and in Section 73.825 from LPFM stations.

An earlier NPR report, "Interference Rejection Thresholds of Consumer Digital Television Receivers on Channel 6 with FM Broadcast Signals" dated December 17 2007 reveals laboratory measurements of 17 consumer digital TV receivers. The earlier NPR report used only three signal levels to measure potential interference to the measured TV receivers. However, the lowest signal level measured in the NPR report is -68 dBm which, according to the planning factors in OET Bulletin 69, is equivalent to a signal strength of

STATEMENT OF JOHN E. HIDLE, P.E.
WPVI-TV - PHILADELPHIA, PENNSYLVANIA
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about 43 dB μ , about 15 dB above the interference protected contour for a TV stations on Channel 6, which is 28 dB μ (-83 dBm). The other two signal levels were -53 dBm (58 dB μ) and -28 dBm (83 dB μ). Using the 43 dB μ signal level on NCE FM channel 201 the report shows that eleven of the 17 receivers exhibit Undesired to Desired signal ratios (D/U) that do not comply with the adjacent channel values defined in the FCC's Rules (26 dB). The worst receiver showed a measured U/D ratio of 5.3 dB, while the best showed a U/D ratio of 34.2 dB. The median for all 17 receivers was 21.1 dB, 5 dB below 26 dB. When signal levels below 43 dB μ are encountered in the Channel 6 TV station's protected coverage area the FM interference can only become more severe, as indicated in the September 5, 2008 NPR report.

This twelve-year old report was an effort to demonstrate that NPR should be given relief from the requirements to protect Channel 6 TV stations from interference that could be caused by Reserved Band (channels 201-220) FM stations. My years of experience as a Consulting Engineer, with several client Channel 6 TV stations, convince me that the Channel 6 protections afforded by Section 73.525 and Section 73.825 are necessary to minimize potential interference, and are minimally burdensome to the reserved band NCE-FM stations and LPTV stations.

Since the protection requirements were instituted in 1985 I have received numerous requests from my Channel 6 TV clients to perform interference studies triggered by the notification from a reserved band FM applicant for a new or changed facility. In these instances the FM applicant dutifully notified the TV station which then authorized me to perform a study to predict potential interference. In most instances potential interference

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was not indicated and the TV station(s) provided letters to the FM applicant(s) permitting their application to be processed. Only in a few instances did the TV station(s) suggest changes to the applicant(s) which would resolve any potential interference. It is noted that once the Channel 6 station(s) received the required notifications it was the TV station(s), not the FM applicant(s), that authorized and paid for the interference studies. Section 73.525 has functioned very well over the past 35 years, and Section 73.825 for the past 20 years, to protect Channel 6 TV stations from potential interference from reserved band FM stations. It seems that the minuscule burden on reserved band FM applicants is far outweighed by the protections afforded to Channel 6 TV stations, particularly since stations like WPVI-TV have yet to recover all of the former over-the-air analog viewers and are seeking to provide service to an increasing number of over-the-air viewers that have cut the cord. The NPR report, in my opinion, provides insufficient evidence to warrant removing the protections for Channel 6 TV stations and there seems to be no other really good reasons to "sunset" Sections 73.525 and 73.825 of the FCC Rules.

POTENTIAL EFFECT IF PROTECTIONS ARE ELIMINATED

If Section 73.525 and/or Section 73.825 were to be eliminated there would then be no requirement for an applicant for an FM facility in the reserved band to notify any Channel 6 TV station of its plans for a new or changed facility. It would then become incumbent on the Channel 6 TV station to become diligent in watching the FM filings at the FCC. The burden of proof would then be shifted from the FM applicant to the Channel 6 TV station. In addition there would be little incentive for an applicant to cooperate with a Channel 6 TV station should it identify a potential for interference. Some in the broadcast

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industry envision a flood of applications for new LPFM stations and FM translators.

There have been suggestions that Section 73.318, which is an FM blanketing interference rule, would serve to protect DTV6 stations. The protection offered is defined with a signal contour of 115 dB μ , within which the signal is strong enough to overload the inputs to many FM receivers, and can affect other devices such as telephones, intercom systems, etc. Such blanketing interference is a result of a receiver input overload mechanism and exists in a limited area. The mechanism for reserved band interference to DTV6 stations can exist within the DTV6 station's coverage area anywhere the FM station's signal level exceeds the DTV6 signal level by the Desired to Undesired ratio, even if the criteria set forth in Section 73.318 is otherwise satisfied. Therefore, Section 73.318 is irrelevant in this instance.

SUMMARY

Operating a TV broadcast station on channel 6 is difficult enough considering the propagation characteristics, terrain variations, the woefully inadequate restricted ERP levels, other anomalies and the incumbent noise levels associated with the low-VHF band. Taking Section 73.525 and Section 73.825 away would constitute just another blow for DTV6 stations' ability to reach their potential viewing audiences.

It is therefore submitted that the discussions of experiences and evaluation of studies contained herein demonstrate the necessity for maintaining Section 73.525 and Section 73.825 for the continued protection of DTV6 television stations from interference that might be caused by applications for new reserved band FM stations and applications

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for changes in existing stations. This statement and the opinions and discussions contained herein were prepared by me based on my own experiences and opinions, and are true to the best of my knowledge and belief.

DATED: March 4, 2020



John E. Hidle, P.E.

