

Supplemental Engineering Statement

This supplemental engineering statement has been prepared on behalf of VideoIndiana, Inc. ("VideoIndiana"), licensee of WTHR-DT, Indianapolis, Indiana ("WTHR"), in further support of its pending request for a waiver of Section 73.622(f) of the Commission rules. VideoIndiana seeks a waiver to operate with an effective radiated power ("ERP") in excess of the maximum allowed for Zone I DTV stations, as VideoIndiana has determined such operation is necessary to provide service to viewers who have experienced significant reception difficulties. Based on broadcasts conducted by WTHR pursuant to a grant of special temporary authority ("STA"), VideoIndiana now has additional evidence that a power increase will help to partially alleviate substantial viewer reception problems.¹ VideoIndiana respectfully urges the Bureau to grant the pending waiver request, which is in the public interest and consistent with the Commission's policy to improve viewers' reception of high VHF DTV stations.

While WTHR's proposed power increase would exceed the maximum power permitted under Section 73.622(f), the power increase is not intended to expand WTHR's coverage area. Rather, the purpose of WTHR's proposed power increase is to restore service to WTHR's viewers who previously were able to receive WTHR's much higher average video power Channel 13 analog signal but have difficulty receiving WTHR's post-transition digital signal despite being located in WTHR's digital service area. Notably, many of the viewers experiencing service losses are within the area previously served by WTHR's Grade A signal contour.

Section 1.3 of the Rules provides for waiver of a Rule "for good cause shown."² The Commission has stated that "a rule may be waived where the particular facts make strict compliance inconsistent with the public interest."³ In this case, strict compliance with the power limits set forth in Section 73.622(f) would be inconsistent with the public interest because it would deprive many viewers of access to the Station's free, over-the-air television signal. For the reasons set forth below, there is good cause to waive Section 73.622(f) and grant this application.

WTHR is authorized to operate on Channel 13 with 30 kW ERP ND pursuant to its license under FCC File Number BLCDT-20100812ABY, and WTHR has received special temporary authority to operate at 42.1 kW DA (which authorization currently is set to expire on December 9, 2011). VideoIndiana desires to permanently increase WTHR's ERP to 42.1kW DA because of post-transition viewer reception problems experienced immediately after the digital transition on June 12, 2009, and which continue to persist.

As VideoIndiana has previously reported, after WTHR commenced its post-transition 22 kW ERP ND DTV facility on June 12, 2009, VideoIndiana received numerous complaints from viewers of poor or no reception of WTHR. VideoIndiana confirmed WTHR viewer reception issues with field tests, including testing on August 11 and 12, 2009, accompanied and augmented by FCC Chicago Field Office Electronics Engineer Mark Lueth. These field tests demonstrated that viewers experienced significant reception problems prior to any increase in ERP. The results of these tests have been submitted previously to the Commission. On February 12, 2010, WTHR was permitted and later licensed to increase ND ERP to 30kW which provided some reception relief, but, even with WTHR's currently licensed 30 kW ERP ND, viewer complaints continue to persist.

As the Commission is aware, high-band VHF digital reception issues like those WTHR is facing have been experienced by many stations across the country and power increases have been helpful in mitigating such problems. As noted in the Engineering Exhibit accompanying the instant application, the Commission's currently licensed VHF DTV power levels are too low for adequate

¹ The evidence was supplied by WTHR-DT engineering staff, which used measurement methodologies that were developed in concert with Cohen, Dippell and Everist, P.C.

² See 47 C.F.R. § 1.3. See also *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

³ See *Request for Waiver of the Decision of the Universal Service Administrator by Douglas-Omaha Tech. Comm'n, Omaha, Nebraska*, Order, File No. SLD 427054, 21 FCC Rcd 9277, at para. 5 (2006).

replication of former VHF analog facilities, which operated at an average video power level several times WTHR's 30kW VHF DTV authorization. The service losses caused by inadequate ERP levels have been exacerbated by additional factors, including the antenna inefficiency of many indoor antennas and "noise" from consumer electronics devices, especially some DTV receivers' LCD screens. CATV signal leakage and FM second harmonic interference also contribute to reception difficulties at the currently licensed VHF DTV ERP levels. *See generally Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF*, Notice of Proposed Rule Making, 25 FCC Rcd 16498 (2010), ¶¶ 42-57 (discussing the various sources of interference, causes of poor reception, and potential strategies to mitigate the issues).

As indicated above, WTHR's "maximized" licensed power increase to 30 kW ERP ND provided some relief, but WTHR's viewers continue to experience reception problems. Since June 17, 2011, WTHR has been operating at 42.1kW DA ERP in accordance with special temporary authority. See FCC File No. BDSTA-20110510ACM. The incremental improvements that these power increases have provided are significant. As documented in the accompanying Engineering Exhibit, WTHR conducted interviews of viewers and took measurements in viewers' homes following WTHR's ERP increases from 22 kW ND to 30 kW ND in February 2010 and then to 42.1 kW DA in June 2011. The accompanying Engineering Exhibit includes representative reports documenting that the increase in ERP to 42.1 kW DA improved viewers' reception of WTHR's VHF DTV signal. For example, one of the representative viewer reports included in the accompanying Engineering Exhibit reflects that viewers that received poor reception prior to the increase in ERP may now receive reliable service, at least during good weather. (While the quality of reception has significantly improved, there remain viewer reception problems, and WTHR believes that it will be necessary to further increase ERP at a later date to replicate the service quality of many viewers within WTHR's Grade A and Grade B contours who previously enjoyed good analog reception.)

As discussed previously, as well as explained in the Engineering Exhibit, WTHR's service losses are principally due to WTHR's significantly lower power high-band VHF Channel 13 DTV authorization (compared to its prior Channel 13 analog average video power). For this reason, strict application of Section 73.622(f) to WTHR would actually contravene the public interest by precluding VideoIndiana from serving WTHR's former analog viewers. The Commission's recent proposal to permit Zone I VHF-band TV stations to increase their power by 6 dB, *see Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF*, Notice of Proposed Rule Making, 25 FCC Rcd 16498 (2010), ¶¶ 42-49, makes clear that the Commission understands the hardship to viewers caused by inadequate high-band VHF ERP levels and recognizes that the public interest is served by authorizing power increases designed to mitigate such hardship.

As the Commission is aware from prior WTHR applications, VideoIndiana has worked diligently towards identifying possible solutions to help restore service to its affected viewers. VideoIndiana respectfully submits that the instant request satisfies the Commission's waiver standard as WTHR viewers within its community of interest have experienced substantial and prolonged reception difficulties. *See Application of Golden West Broadcasters*, 66 Rad. Reg. 2d (P&F) 91, ¶ 11 (1989) (finding that public interest would be best served by waiver of maximum power limitations given inadequacy of station's service to its community of license). WTHR's high-band VHF digital reception issues, the need to restore service to WTHR's former analog viewers who have difficulty or cannot receive WTHR's post-transition digital service, and the consent of WBKO and Gray Television to WTHR's Proposed Operation are special circumstances that make strict compliance with Section 73.616(e) and Section 73.622(f) inconsistent with the public interest. The requested waiver will serve the public interest by restoring television service to the public.

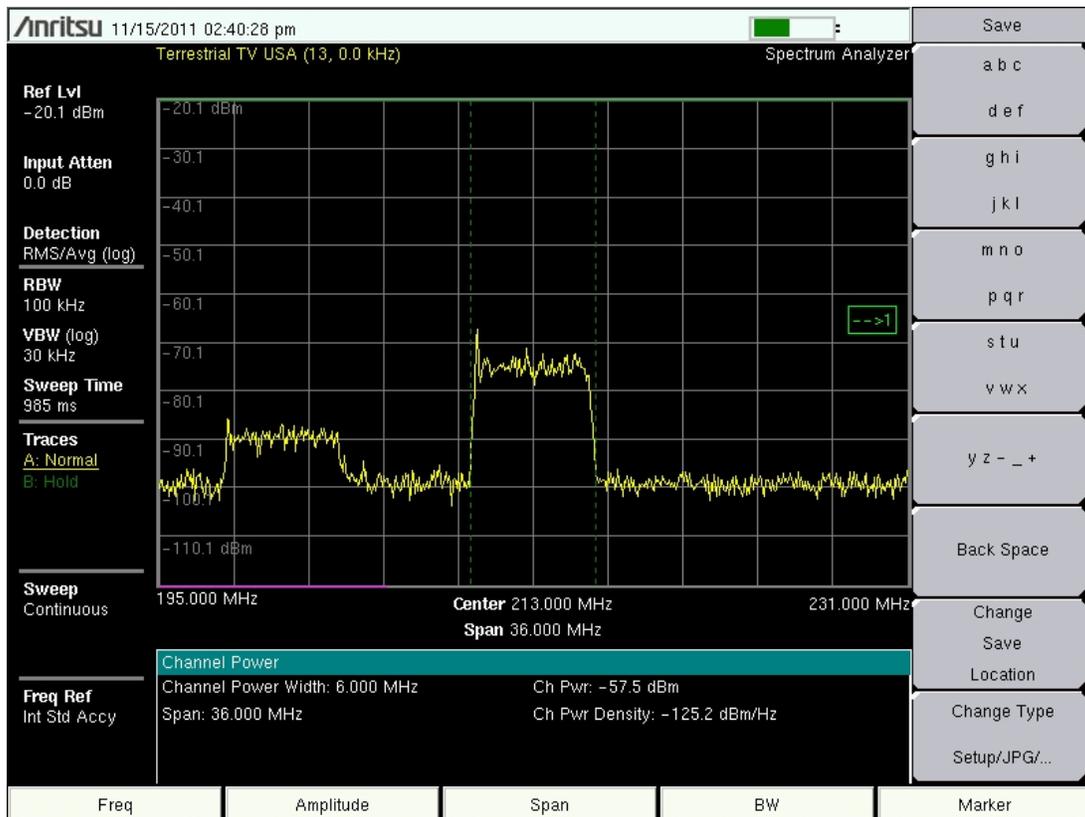
Engineering Exhibit

VideIndiana has investigated WTHR viewer reception issues by performing field tests at a number of viewer homes and other sites. WTHR initially performed field tests on August 11 and 12, 2009, which were compiled into a report that is already on file with the Commission. After WTHR's ERP increases from 22 kW ND to 30 kW ND in February 2010 and to 42.1 kW DA in June 2011, follow up interviews and measurements were made to determine the extent to which increases in ERP affected viewers' reception. The following three reports are representative of many Indianapolis and Central Indiana viewers' reception of Indianapolis VHF DTV signals at current ERP levels.

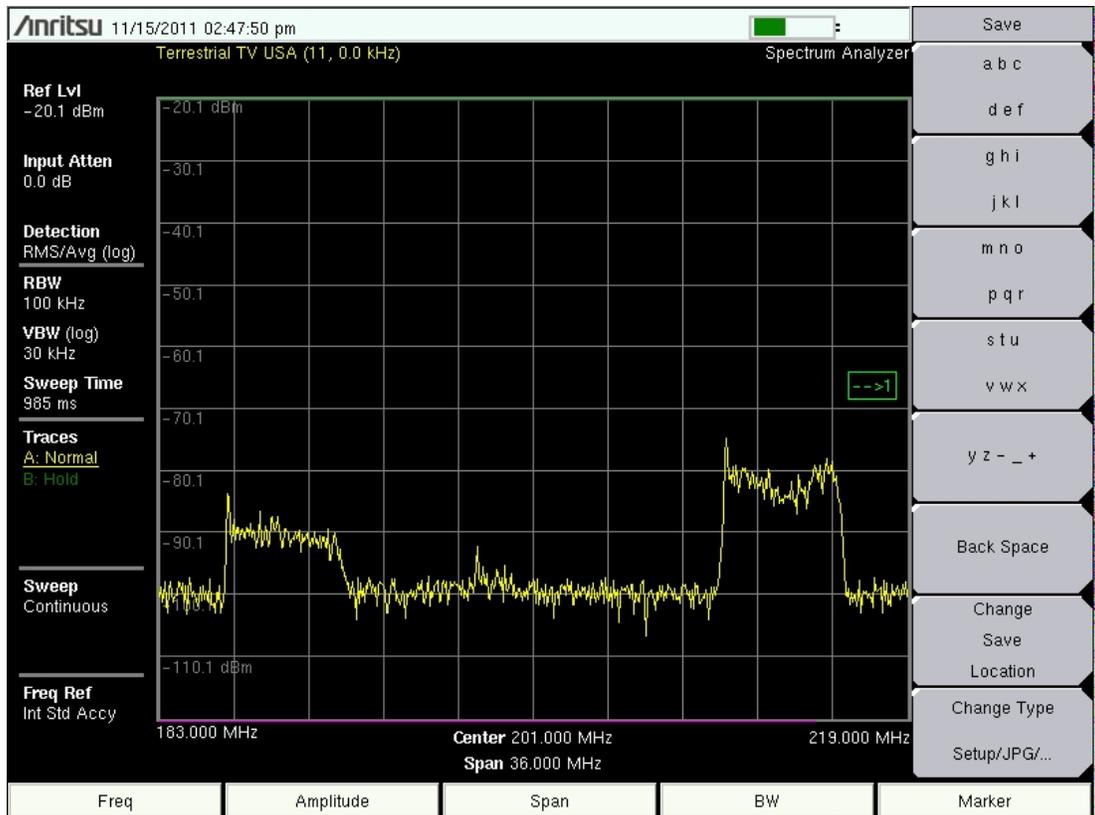
Viewer Household #1

Location: Edinburgh, Indiana (41.5 miles distant)

Viewer Report & Field Test: Viewer reported having previously had good VHF analog reception. However, in August 2009, viewer reported having very limited reception of VHF DTV stations. In November 2011 (following increase in ERP to 42.1 kW), viewer reported that reception of WTHR's channel 13 VHF DTV signal had improved significantly, although viewer's VHF signals (RF 9 & RF 13) remained the weakest. Specifically, viewer reported that WISH RF 9 often disappears, and WTHR RF 13 pixelates during heavy rainstorms. Field tests were consistent with viewer reports.



L-R 11/14 WTHR DTV Signal From Viewer Ant



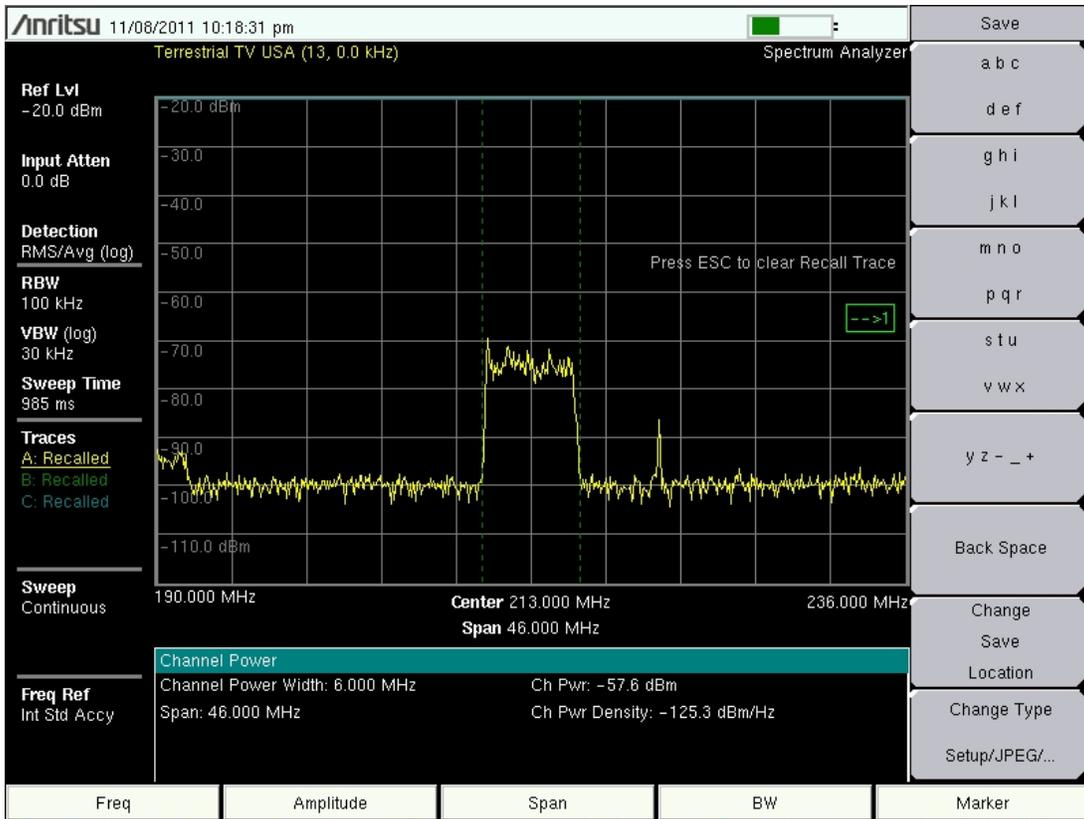
L-R 11/14 WTHR DTV Signal From Dipole

Viewer Household #2

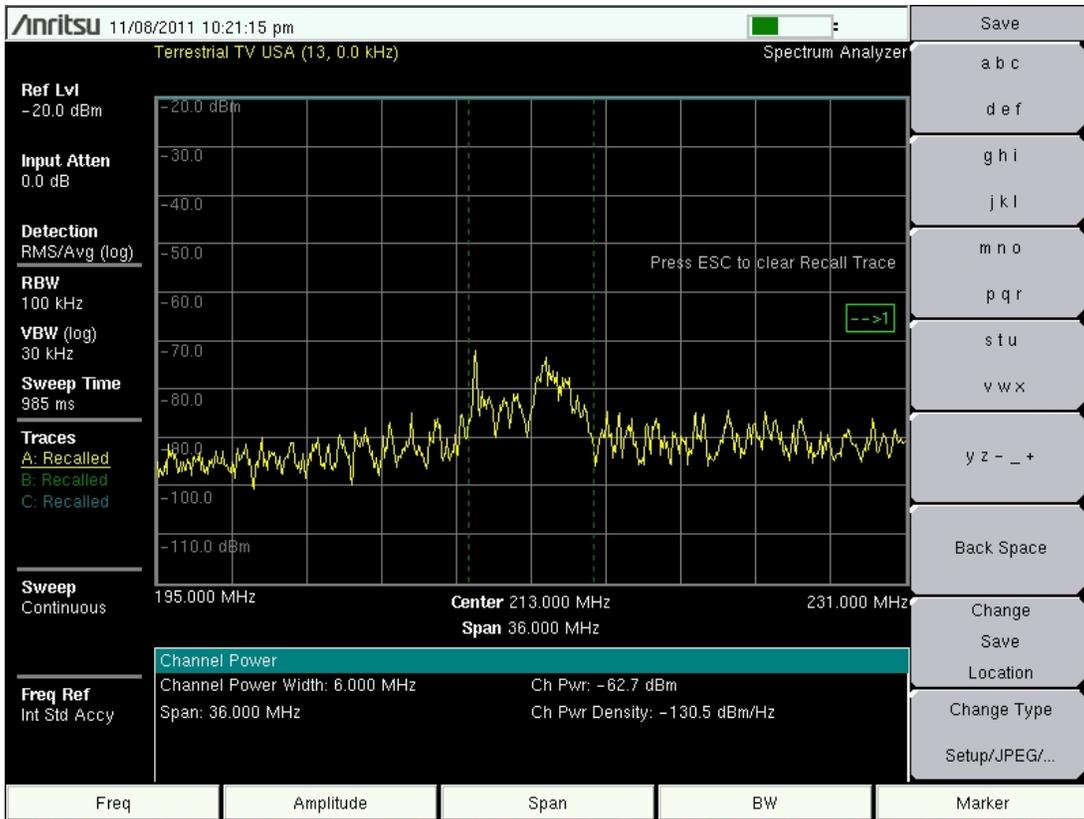
Location: Crestwood Village Retirement Community, Indianapolis, Indiana (20.2 miles distant). Specifically, reception was measured from the first floor of senior apartment facility on the opposite side of the building from the Indianapolis television towers.¹

Viewer Report & Field Test: Viewer reported having previously had good VHF analog reception. In August 2009, viewer reported good reception of UHF DTV stations but also reported that it was not possible to receive VHF DTV at all. Field tests confirmed that VHF DTV signals were too low in strength to be measurable inside apartment. In November 2011 (following increase to 42.1 kW), field tests found that primary television set (Insignia HDTV) still failed to capture WISH RF 9 or WTHR RF 13, although the television set now pauses on channel 13 as it tries to lock the stream. Field tests indicated that it is now possible to obtain marginal reception of WTHR RF 13 on bedroom converter box w/RCA "rabbit ears/loop" antenna.

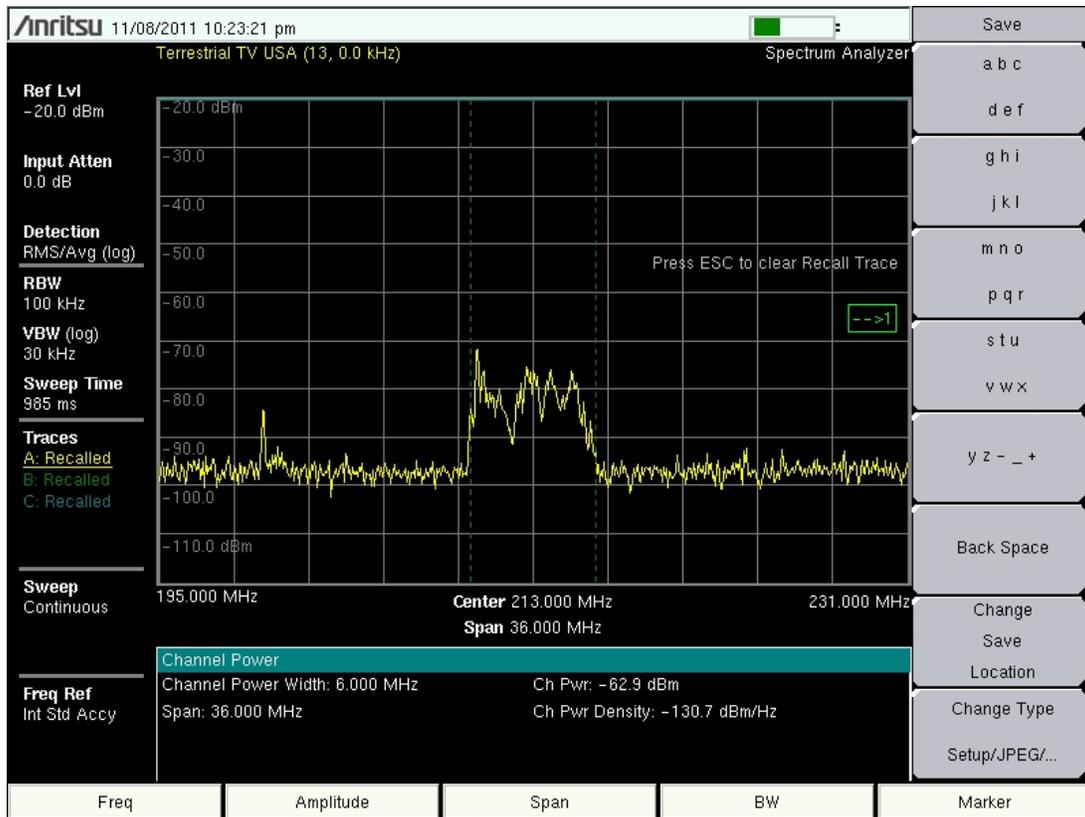
¹ Viewer reception depends on signal reflections from a building to the immediate south.



L-R, 11/11 WTHR DTV Signal in Parking Lot



L-R, 11/11 WTHR DTV Signal inside with Insignia HDTV on



L-R, 11/11 WTHR DTV Signal inside with Insignia HDTV off

Viewer Household #3

Location: Franklin, Indiana (31.1 miles distant)

Viewer Report and Field Test: Viewer reported having previously had good VHF analog reception. In August 2009, viewer reported poor reception of WTHR DTV RF 13. In August 2010 (following February 2010 increase in ERP to 30 kW), viewer reported reliable reception of WTHR HD channels using indoor antenna and converter, although noted that signal fades in “stormy weather.”

These representative reports and measurements demonstrate that WTHR’s ERP increases to 30 kW ND and 42.1 kW DA have provided incremental improvement of reception for Indianapolis and Central Indiana viewers. In the cases of the Edinburg and Franklin viewers, reception went from poor/marginal to more stable and reliable, but both viewers reported that reception was still vulnerable to deterioration during rainstorms. The Crestwood Village viewer has only very marginal reception of WTHR RF 13 on a bedroom TV/converter box, and still lacks an adequate signal for her main television set to lock. UHF reception for all viewers is good across the board.

It is clear that the ERP increases granted and permitted to WTHR have provided incremental, yet significant, reception improvement. At the same time, field tests suggest that further ERP increase may still necessary to replicate and restore service to many viewers within WTHR’s Grade A/B contours who previously enjoyed good analog reception.