

Exhibit 34 - Statement B
ALLOCATION CONSIDERATIONS
INTERFERENCE ANALYSIS

prepared for
Greater Washington Educational Telecommunications Association, Inc.
WETA-DT Washington, DC
Facility ID 65670
Ch. 27 90 kW 254 m

The DTV reference effective radiated power (“ERP”) and height above average terrain (“HAAT”) of 67.2 kW and 233 meters, respectively, for WETA-DT have been established under **Appendix B** of the Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders in MM Docket 87-268, FCC 98-315, released December 18, 1998 (“*SMO&O*”), per §73.622(f)(1) of the Commission’s rules. The proposed WETA-DT facility will operate with 90 kW ERP at 254 meters HAAT; the proposed ERP and HAAT combination thus exceeds the reference ERP and HAAT. Accordingly, as required by §73.622(f)(5), a study was conducted to evaluate interference to analog facilities and DTV assignments that may be attributed to the proposed WETA-DT facility.

A detailed interference study was conducted in accordance with the terrain dependent Longley-Rice point-to-point propagation model, per the Commission’s Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, July 2, 1997 (“OET-69”).³ The interference study examined the net change in interference as experienced by other stations that would result from the proposed facility (in lieu of the reference WETA-DT). All stations considered in this study are listed in **Exhibit 34 - Table 2**. The results of the interference study, also summarized in **Exhibit 34 - Table 2**, indicate that any additional interference to these stations meets the Commission’s 2% / 10% interference limits to all pertinent NTSC and DTV stations and allotments, except for the WFPT-DT Construction Permit facility as described below.

³The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A standard cell size of 2 km was employed. Comparisons of various results of this computer program (run on a Sun processor) to the Commission’s implementation of OET-69 show excellent correlation.

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Interference to WFPT-DT

The instant proposal would involve interference caused to the CP facility for WFPT-DT (Ch. 28, Frederick, MD, BPEDT-20000501ABL) in excess of the Commission's 2% / 10% limit. As indicated on **Exhibit 34 - Table 2**, although new interference to WFPT-DT would be 1.66 percent (within the 2 percent limit), the total interference to WFPT-DT would rise to 18.1 percent which exceeds the 10 percent limit.

By way of background, a Construction Permit ("CP," BPEDT-20000427ACG) authorizes WETA-DT to relocate and increase ERP and antenna HAAT. The CP is due to expire on April 24, 2004. The instant application requests grant of an identical replacement CP.

The WETA-DT CP was granted on April 24, 2001. This occurred following receipt of a "30-day" deficiency letter from the Commission's Staff (dated February 21, 2001, copy attached) which indicated that the CP could not be granted because of interference which would be caused to the CP facility for WFPT-DT (Ch. 28, Frederick, MD, BPEDT-20000501ABL). The Commission's OET Bulletin 69 analysis in 2001 indicated that the WFPT-DT CP facility would experience interference in excess of 10 percent "before" consideration of the WETA-DT proposal, and the WETA-DT application would increase the amount of interference to WFPT-DT.

Upon receipt of the Commission's "30-day" letter in 2001, it was found that the WFPT-DT CP had been granted on August 4, 2000. The underlying application for WFPT-DT's CP was filed on May 1, 2000, a few days after the filing of the WETA-DT application for CP, on April 24, 2000. Under the Commission's processing rules at that time, the WETA-DT and WFPT-DT applications should have been held as mutually exclusive, considering the increase in interference which would result to WFPT-DT. Instead, the WFPT-DT application was granted, on August 4, 2000, well in advance of the Commission's February 21, 2001 "30-day" letter to *GWETA* regarding the WETA-DT application.

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In informal discussions, Commission Staff acknowledged that the WFPT-DT application had been granted in error and that the WFPT-DT and WETA-DT applications should be considered as mutually exclusive. To resolve the situation (and apparently others like it), the WETA-DT application was granted, on April 24, 2001.

Turning to the instant application, *GWETA* is proposing the same facilities as specified in BPEDT-20000427ACG, which involves the same conflict with the WFPT-DT CP facility. Specifically, analysis per OET Bulletin 69 shows that WETA-DT would cause 1.7 percent new interference to the WFPT-DT facility. Total interference to WFPT-DT CP is 16.4 percent “before” consideration of WETA-DT CP, and 18.1 percent “after,” which does not comply with the *de minimis* interference limit since the total interference is over 10 percent.

The OET Bulletin 69 analysis indicates that the WETA-DT CP facility does continue to comply with the Commission’s *de minimis* interference limits with respect to all other facilities, including the allotment facility for WFPT-DT, as shown in **Exhibit 34 - Table 2**. Additionally, an application is pending to modify the WFPT-DT CP (BMPEDT-20030609ADG). Interference to the WFPT-DT application facility would not exceed the *de minimis* limits as a result of the proposed WETA-DT facility (in fact, interference to the WFPT-DT application facility would be *reduced*). Should the Commission grant the pending application to modify the WFPT-DT CP, then the instant proposal would comply fully with the *de minimis* criteria.

If a waiver of §73.623(c)(2) is required, then one is requested on behalf of the applicant for the reasons described above.

Class A Station Protection

With respect to television stations that have been granted a Class A License or hold a Class A Construction Permit, the instant proposal does not involve prohibited contour overlap to any Class A station, except for WADA-LP (CP, Ch. 27, Charlottesville, VA, 162.5 km distant). WADA-LP(CP)

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would receive contour overlap that would be prohibited under §73.623(c)(5)(i) from the proposed WETA-DT facility. Standard protection requirements are met to all other pertinent Class A stations.

A detailed review of the situation regarding WADA-LP(CP) disclosed that overlap which would be prohibited presently exists from the licensed and reference WETA-DT facilities. This overlap creates an area of “existing” predicted interference to WADA-LP(CP) under the standard method of interference prediction specified in §73.623(c)(5)(i).

Per §73.623(c)(5)(iii) of the Commission’s Rules, a request for waiver of the standard contour protection requirements of §73.623(c)(5)(i) may be based on a more detailed analysis to show that interference is not likely. Specifically, interference protection to a Class A station from a DTV modification may also be demonstrated using OET-69 methods. Accordingly, detailed interference studies were conducted in accordance with OET-69 to determine the impact of the proposed WETA-DT facility on WADA-LP(CP).⁴

The results of the interference study regarding the affected Class A stations are summarized in **Exhibit 34 - Table 3**. As shown therein, the proposed WETA-DT facility is predicted to cause interference to WADA-LP(CP) affecting four (4) persons, which is 0.004 percent of the WADA-LP baseline population. This is well below the Commission’s 0.5 percent rounding tolerance employed regarding DTV station interference to Class A stations. If a waiver of §73.623(c)(5)(i) is necessary, then one is respectfully requested on behalf of the applicant for the reasons stated above.

⁴For OET-69 evaluation of Class A station service, a nominal cell size of 1 km was employed (since the Class A station service area is much smaller than that for full-power stations). The service area for the involved analog Class A facility is that area predicted to receive signal levels of at least 74 dBμ using the Longley-Rice methodology, and within the 74 dBμ F(50,50) service contour distance as corrected with the dipole factor.

Exhibit 34 - Table 2
INTERFERENCE ANALYSIS RESULTS SUMMARY
 prepared for
Greater Washington Educational Telecommunications Association, Inc.
 WETA-DT Washington, DC
 Facility ID 65670
 Ch. 27 90 kW 254 m

DTV Facilities

<u>Stations Considered</u>	<u>City, State Channel</u>	<u>Distance (km)</u>	<u>Baseline Population (1)</u>	<u>Calculated “Before” Service Population (2)</u>	<u>Calculated “After” Service Population (3)</u>	<u>--- Net “New” Interference --- (“2 percent” test)</u>		<u>Percentage Reduction of Baseline Population (“10 percent” test) (6)</u>
						<u>Population</u> (4)	<u>Percentage</u> (5)	
WRLH-DT (Ref)	Richmond, VA 26	169.3				----- no interference caused by proposal -----		
WRLH-DT (CP)	Richmond, VA 26	166.0				----- no interference caused by proposal -----		
KYW-DT (Ref)	Philadelphia, PA 26	199.4				----- no interference caused by proposal -----		
KYW-DT (CP)	Philadelphia, PA 26	199.2				----- no interference caused by proposal -----		
WGTW-DT (Ref)	Burlington, NJ 27	199.3	6,471,000	6,425,779	6,426,759	(980)	-0.02	0.68
WGTW-DT (CP)	Burlington, NJ 27	199.3	6,471,000	6,702,228	6,702,912	(684)	-0.01	0.00
WRDC-DT (Ref)	Durham, NC 27	385.6				----- no interference caused by proposal -----		
WRDC-DT (CP)	Durham, NC 27	385.6	2,096,000	2,187,777	2,187,777	0	0.00	0.00

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INTERFERENCE ANALYSIS RESULTS SUMMARY
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DTV Facilities (cont'd)

<u>Stations Considered</u>	<u>City, State Channel</u>	<u>Distance (km)</u>	<u>Baseline Population (1)</u>	<u>Calculated “Before” Service Population (2)</u>	<u>Calculated “After” Service Population (3)</u>	<u>--- Net “New” Interference --- (“2 percent” test)</u>		<u>Percentage Reduction of Baseline Population (“10 percent” test) (6)</u>
						<u>Population (4)</u>	<u>Percentage (5)</u>	
WTBY-DT (Lic)	Poughkeepsie, NY 27	388.0	2,059,000	9,891,924	9,891,924	0	0.00	0.00
WTBY-DT (Ref)	Poughkeepsie, NY 27	404.0		----- no interference caused by proposal -----				
WNYB-DT (Ref)	Jamestown, NY 27	423.3		----- no interference caused by proposal -----				
WNYB-DT (CP)	Jamestown, NY 27	423.3		----- no interference caused by proposal -----				
WFPT-DT (Ref)	Frederick, MD 28	44.8	1,990,000	1,924,022	1,899,126	24,896	1.25	4.57
WFPT-DT (CP)	Frederick, MD 28	44.8	1,990,000	1,662,808	1,629,831	32,977	1.66	18.10
				----- exceeds <i>de minimis</i> limit - waiver requested -----				
WFPT-DT (App)	Frederick, MD 28	39.8	1,990,000	1,944,836	1,990,261	(45,425)	-2.28	0.00

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NTSC Facilities

<u>Stations Considered</u>	<u>City, State Channel</u>	<u>Distance (km)</u>	<u>Baseline Population</u> (1)	<u>Calculated “Before” Service Population</u> (2)	<u>Calculated “After” Service Population</u> (3)	<u>--- Net “New” Interference --- (“2 percent” test)</u>		<u>---Total Interference--- from DTV only (“10 percent” test)</u>	
						<u>Population</u> (4)	<u>Percentage</u> (5)	<u>Population</u> (7)	<u>Percentage</u> (8)
WDCA(TV) (Lic)	Washington, DC 20	2.6		----- no interference caused by proposal -----					
WUTB(TV) (Lic)	Baltimore, MD 24	46.5	5,877,388	5,368,665	5,375,488	(6,823)	-0.12	80,773	1.37
WHAG-TV (Lic)	Hagerstown, MD 25	109.8		----- no interference caused by proposal -----					
WHAG-TV (CP)	Hagerstown, MD 25	109.9		----- no interference caused by proposal -----					
WETA-TV (Lic)	Washington, DC 26	2.6	5,963,443	5,377,826	5,377,826	0	0.00	258,832	4.34
WHTM-TV (Lic)	Harrisburg, PA 27	152.0	1,874,912	1,509,563	1,505,776	3,787	0.20	147,152	7.85
WGNT(TV) (Lic)	Portsmouth, VA 27	243.5		----- no interference caused by proposal -----					
WFXR-TV (Lic)	Roanoke, VA 27	332.7		----- no interference caused by proposal -----					
WKBN-TV (Lic)	Youngstown, OH 27	384.0		----- no interference caused by proposal -----					
WCPB(TV) (Lic)	Salisbury, MD 28	143.8		----- no interference caused by proposal -----					

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NTSC Facilities (cont'd)

<u>Stations Considered</u>	<u>City, State Channel</u>	<u>Distance (km)</u>	<u>Baseline Population (1)</u>	<u>Calculated “Before” Service Population (2)</u>	<u>Calculated “After” Service Population (3)</u>	<u>--- Net “New” Interference --- (“2 percent” test)</u>		<u>---Total Interference--- from DTV only (“10 percent” test)</u>	
				<u>Population (4)</u>	<u>Percentage (5)</u>	<u>Population (7)</u>	<u>Percentage (8)</u>		
WCPB(TV) (CP)	Salisbury, MD 28	143.8		----- no interference caused by proposal -----					
WWPB(TV) (Lic)	Hagerstown, MD 31	109.4		----- no interference caused by proposal -----					

- Notes:
- (1) For DTV stations, greater of NTSC or DTV Service Population, from FCC Table
For NTSC stations, total population within noise-limited contour
 - (2) Service population after reduction from terrain and interference losses, before consideration of proposal
 - (3) Service population after reduction from terrain and interference losses, considering proposal
 - (4) Net change in population receiving interference resulting from proposal, equals (2) minus (3). A negative number indicates a *reduction* in interference.
 - (5) Proposal’s impact in terms of percentage, equals (4)/(1) times 100 percent: not to exceed *de minimis* limit of 2.0 percent
 - (6) Total interference to DTV stations: equals 100 percent minus [(3)/(1) X 100%]; proposal may not add interference above 10% total. Zero total interference is indicated if (3) is greater than (1).
 - (7) NTSC station total population subject to interference from DTV only sources (considering proposal)
 - (8) Proposal’s impact to NTSC station in terms of percentage, equals (7)/(1) times 100 percent; proposal may not add interference above 10% total

The determination of stations for consideration and the determination of baseline population and interference percentages were made as described in the Commission’s August 10, 1998 Public Notice “*Additional Application Processing Guidelines for Digital Television*”

Exhibit 34 - Table 3
CLASS A STATION INTERFERENCE ANALYSIS RESULTS SUMMARY
 prepared for
Greater Washington Educational Telecommunications Association, Inc.
 WETA-DT Washington, DC
 Facility ID 65670
 Ch. 27 90 kW 254 m

<u>Stations Considered</u>	<u>City, State Channel</u>	<u>Distance (km)</u>	<u>Baseline Population (1)</u>	<u>Service Population (2)</u>	<i>---- Unique Interference ---- from proposal</i>	
					<u>Population (3)</u>	<u>Percentage (4)</u>
WADA-LP (CP)	Charlottesville, VA 27	162.5	104,418	101,056	4	0.00

OET-69 Class A station analysis notes:

- (1) Population within 74 dBμ service contour, as adjusted with dipole factor
- (2) Service population after reduction from terrain and interference losses, before consideration of proposal
- (3) Net change in population receiving interference resulting from proposal
A number in parenthesis indicates a decrease in interference
- (4) Proposal's impact in terms of percentage, equals (3)/(1) times 100 percent: not to exceed zero when rounded to the nearest whole percent



Federal Communications Commission
Washington, D.C. 20554

ATTACHMENT I

FEB 21 2001

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Greater Washington Ed. Tele. Assoc., Inc.
2775 South Quincy Street
Arlington, VA 22206

In Re: ⁰⁴²⁷BPEDT-2000027ACG
WETA-DT
Fac Id: 65670
Washington, DC

Dear Applicant:

This is in reference to the above-captioned application for a construction permit for a new digital television (DTV) station on channel 27 at Washington, DC.

We have completed our technical review of your application and conclude that it cannot be granted because it would have an adverse impact on the future implementation of Digital Television (DTV) in the United States. See *FCC Public Notice, Additional Application Processing Guidelines for Digital Television (DTV)*, released August 10, 1998. Specifically, a grant of your proposal would cause a reduction in the population that would receive DTV service within the replicated service area of station WFPT-DT located in Frederick, MD, by 31.7 percent utilizing a 2 km cell. The interference would occur on WFPT-DT's DTV channel 28, which is first adjacent channel to your proposed DTV operation.

Accordingly, you must within 30 days of the date of this letter, amend your application so that it will meet with the criteria specified in Section 73.623(c)(2) of the Commission's Rules. It is recommended that at this point in time you conduct a complete technical analysis of your proposal in an effort to correct the deficiency outlined in this letter as well as any other technical problems that might exist. You are cautioned that your failure to comply with the requirements of this letter within the time specified herein may result in the dismissal of your application pursuant to Section 73.3568(a) of the Commission's Rules.

Sincerely,

Clay Pendarvis
Chief, Television Branch
Video Services Division
Mass Media Bureau

cc: Margaret L. Miller, Esq.