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**B. W. St. Clair**

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## **ENGINEERING STATEMENT**

**In regard to the application of:**  
**Abacus Television**  
**W56DX, FID 264**  
**Channel 56, Wheeling, WV**  
**For Minor change to license BLTTL-20000810ABX**

The following facilities' protected contours are intersected by the appropriate respective interfering F50,10 contours from the applicant's proposal. Accordingly, Longley Rice studies were performed using OET Bulletin 69 methodology to determine the presence or absence of actual interference.

The stations studied following are:

NEW.A (56-) Clarksburg, WV - BNPTT20000831BSE  
WTOV-D.C (57) Steubenville, OH - BPCDT19991029ABP  
WTOV-D.A (57) Steubenville, OH - BMPCDT20020408AAK  
W56CG (56+) Greensburg, PA - BLTTL19990309JA

A summary of the studies indicates that interference caused/contributed by the within application to the listed stations, respectively, is as follows:

Interference to:

NEW.A (56-) Clarksburg, WV - BNPTT20000831BSE - NONE.  
WTOV-D.C (57) Steubenville, OH - BPCDT19991029ABP - 0.125%  
WTOV-D.A (57) Steubenville, OH - BMPCDT20020408AAK - 0.006%  
W56CG (56+) Greensburg, PA - BLTTL19990309JA - 0.191%

Interference shown by these studies to all considered facilities is less than 0.5%. To achieve these results, reliance on masking by other facilities was not required. Accordingly, waiver of §73.705, 73.706 and 73.707 is requested as applicable in order to allow the within application to proceed to the permitting process.

The printouts of these studies as run on V-Soft, Inc. Probe II software are appended following.

J. R. McDonald  
May 30, 2003

V-Soft Communications Population Report  
INCOMING TO NEW.A (56-) Clarksburg, WV - BNPTT20000831BSE FROM W56DX PROPOSAL, Channel 56,  
Wheeling, WV

TV Incoming Interference Study  
Signal Resolution: 1.5 km  
Consider NTSC Taboo: Yes  
KWX error points are considered to  
be interference free coverage.  
# of radials computed for contours: 36  
Contours calculated using 8 radial HAAT.  
LR Profile Spacing Increment: 0.1 km  
Interference considered within the  
reference station's 74 dBu FCC contour.  
Using NTSC lptv/translators D/U rules.  
Threshold for reception: 74.0

Study Date: 5/29/2003  
TV Database Date: 05-09-03

Population Database: 1990 US Census

Percentages calculated using a baseline population of 40,038.

Stations considered which do not cause interference:

W56DX.A (56Z)

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Call Letters      City                      State      Dist      Bear  
W56DX.A (56Z)      Wheeling                      WV              91.5      337.6  
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Totals for NEW.A (56-)

Calculation Area Population:	40,052	(	244.7 sq. km )
Not Affected by Terrain Loss:	40,038	(	242.6 sq. km )
Total NTSC Interference:	0	(	0.0 sq. km )
DTV Only Interference:	0	(	0.0 sq. km )
Total DTV Interference:	0	(	0.0 sq. km )
Interfered Population:	0	(	0.0 sq. km )
Interference Free:	40,038	(	242.6 sq. km )

Percent Interference: 0.00

Terrain Blocked Population:	14	(	2.1 sq. km)
Contour Area Population:	41,193		

V-Soft Communications Population Report  
 INCOMING TO WTOV-D.C (57) Steubenville, OH - BPCDT19991029ABP FROM W56DX PROPOSAL, Channel  
 56, Wheeling, WV

TV Incoming Interference Study  
 Signal Resolution: 1.5 km  
 Consider NTSC Taboo: Yes  
 KWX error points are considered to  
     be interference free coverage.  
 # of radials computed for contours: 36  
 Contours calculated using 8 radial HAAT.  
 LR Profile Spacing Increment: 0.1 km  
 Interference considered within the  
 reference station's noise limited contour.  
 Using NTSC lptv/translators D/U rules.  
 Threshold for reception: 42.501

Study Date: 5/29/2003  
 TV Database Date: 05-09-03

Population Database: 1990 US Census

Percentages calculated using a baseline population of 2,440,951.

Stations which cause interference:

Call Letters	H Units	Population	%	Area (sq. km)
W56DX.A (56Z)	1625	3042	0.125	4.21

Masking Summary:

Call Letters	Total Interference Population	%	Unique Interference Population	%
W56DX.A (56Z)	3042	0.125	3042	0.125

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Call Letters	City	State	Dist	Bear
W56DX.A (56Z)	Wheeling	WV	41.3	226.4

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Totals for WTOV-D.C (57)

Calculation Area Population:	2,519,850	(	15567.5 sq. km )
Not Affected by Terrain Loss:	2,440,951	(	15069.8 sq. km )
Total NTSC Interference:	3,042	(	4.2 sq. km )
DTV Only Interference:	0	(	-0.0 sq. km )
Total DTV Interference:	0	(	0.0 sq. km )
Interfered Population:	3,042	(	4.2 sq. km )
Interference Free:	2,437,909	(	15065.5 sq. km )

Percent Interference: 0.12

Terrain Blocked Population:	78,899	(	497.7 sq. km)
Contour Area Population:	2,523,239		

V-Soft Communications Population Report  
 INCOMING TO WTOV-D.A (57) Steubenville, OH - BMPCDT20020408AAK FROM W56DX PROPOSAL,  
 Channel 56, Wheeling, WV

TV Incoming Interference Study  
 Signal Resolution: 1.5 km  
 Consider NTSC Taboo: Yes  
 KWX error points are considered to  
     be interference free coverage.  
 # of radials computed for contours: 36  
 Contours calculated using 8 radial HAAT.  
 LR Profile Spacing Increment: 0.1 km  
 Interference considered within the  
 reference station's noise limited contour.  
 Using NTSC lptv/translators D/U rules.  
 Threshold for reception: 42.501

Study Date: 5/29/2003  
 TV Database Date: 05-09-03

Population Database: 1990 US Census

Percentages calculated using a baseline population of 3,081,844.

Stations which cause interference:

Call Letters	H Units	Population	%	Area (sq. km)
W56DX.A (56Z)	71	177	0.006	2.11

Masking Summary:

Call Letters	Total Interference Population	%	Unique Interference Population	%
W56DX.A (56Z)	177	0.006	177	0.006

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Call Letters	City	State	Dist	Bear
W56DX.A (56Z)	Wheeling	WV	33.2	199.8

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Totals for WTOV-D.A (57)

Calculation Area Population:	3,188,127	(	23537.3 sq. km )
Not Affected by Terrain Loss:	3,081,844	(	22613.9 sq. km )
Total NTSC Interference:	177	(	2.1 sq. km )
DTV Only Interference:	0	(	-0.0 sq. km )
Total DTV Interference:	0	(	0.0 sq. km )
Interfered Population:	177	(	2.1 sq. km )
Interference Free:	3,081,667	(	22611.8 sq. km )

Percent Interference: 0.01

Terrain Blocked Population:	106,283	(	923.4 sq. km)
Contour Area Population:	3,182,703		

V-Soft Communications Population Report  
 INCOMING TO W56CG (56+) Greensburg, PA - BLTTL19990309JA FROM W56DX PROPOSAL, Channel 56,  
 Wheeling, WV

TV Incoming Interference Study  
 Signal Resolution: 1.5 km  
 Consider NTSC Taboo: Yes  
 KWX error points are considered to  
     be interference free coverage.  
 # of radials computed for contours: 36  
 Contours calculated using 8 radial HAAT.  
 LR Profile Spacing Increment: 0.1 km  
 Interference considered within the  
 reference station's 74 dBu FCC countour.  
 Using NTSC lptv/translators D/U rules.  
 Threshold for reception: 74.0

Study Date: 5/30/2003  
 TV Database Date: 05-29-03

Population Database: 1990 US Census

Percentages calculated using a baseline population of 282,242.

Stations which cause interference:

Call Letters	H Units	Population	%	Area (sq. km)
W56DX.A (56Z)	203	540	0.191	2.10

Masking Summary:

Call Letters	Total Interference Population	%	Unique Interference Population	%
W56DX.A (56Z)	540	0.191	540	0.191

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Call Letters	City	State	Dist	Bear
W56DX.A (56Z)	Wheeling	WV	102.0	255.1

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Totals for W56CG (56+)

Calculation Area Population:	314,210	(	952.5 sq. km )
Not Affected by Terrain Loss:	282,242	(	883.3 sq. km )
Total NTSC Interference:	540	(	2.1 sq. km )
DTV Only Interference:	0	(	-0.0 sq. km )
Total DTV Interference:	0	(	0.0 sq. km )
Interfered Population:	540	(	2.1 sq. km )
Interference Free:	281,702	(	881.2 sq. km )

Percent Interference: 0.19

Terrain Blocked Population:	31,968	(	69.2 sq. km)
Contour Area Population:	311,726		

END OF EXHIBIT