

Exhibit A
Technical Exhibit

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LEHIGH VALLEY PUBLIC TELECOMMUNICATIONS CORPORATION

BETHLEHEM, PA

LICENSEE OF

WLVT-TV/DT

ALLENTOWN, PENNSYLVANIA

FCC Facility ID #36989

FCC FILE No. BLEDT-20030131AEW

**ENGINEERING EXHIBIT IN SUPPORT OF A
PETITION FOR RECONSIDERATION IN MM DOCKET 87-268**

November 8, 2007

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This Engineering Exhibit has been prepared for Lehigh Valley Public Telecommunications Corporation (“Lehigh”) in support of a Petition for Reconsideration (“Petition”) in MM Docket 87-268 regarding the post transition facilities proposed by the Commission for WLVT-DT.

BACKGROUND

Lehigh operates public television stations WLVT-TV on Channel 39 and companion public digital public television station WLVT-DT on Channel 62. Lehigh has elected to return to its analog channel post transition and has received a covering license (BLEDT-20030131AEW) covering the facilities proposed in a Construction Permit (BPEDT-19990902AAE) on Channel 62. The constructed facility is located on an

adjoining tower to that utilized by WLVT-TV and initially proposed for WLVT-DT in MM Docket 87-268¹.

The Docket 87-268 allotted facilities were 50 kW at 302 meters HAAT with a somewhat directional pattern (FCC antenna rep_PAALLEN TOWN_62). The constructed facilities on out of core Channel 62 were 47.7 kW with a more directional antenna (Antenna ID 27819) and situated on the available tower, based on available aperture, 8 meters lower in HAAT or 294 meters. The constructed facilities met the requirement of covering at least 80% of the allotted Channel 62 facilities and thus Lehigh is eligible to transfer the allotted facilities back to Channel 39, its present analog channel.

WLVT-DT ALLOCATIONS SITUATION

In the 7th R&O and 8th FNPRM in Docket 87-268 in Appendix B, the Commission proposed that WLVT-DT, on Channel 39, would be authorized an ERP of 50 kW at 302 meters on the presently licensed analog tower with a directional antenna pattern very nearly circular as shown in FCC antenna ID 74699².

Lehigh plans to locate the final DTV facilities of WLVT-DT on the structure and at the height (294 meters HAAT) currently licensed for WLVT-DT on Channel 62 with an omni-directional or nearly omni-directional antenna within the limits of UHF TV transmitting antenna current technology³. As such, while the resultant WLVT-DT, Channel 39 parameters as listed in Appendix B more than duplicate the existing WLVT-DT Channel 62 presently licensed coverage when taking into account the differences in the digital protected contour for each channel⁴, the lower HAAT results in a coverage area for the 41.11 dBu contour of 16,950 square kilometers while the allotted facilities cover 17,359 square kilometers neglecting interference.

¹ The allotted post transition facilities for WLVT-DT are on the tower now utilized by NTSC WLVT-TV, Channel 39.

² The tabulated directional pattern of 74699 is identical to that of the original rep_PAALLEN TOWN_62 pattern.

³ The presently licensed and post transition proposed coordinates for WLVT-DT are 40-33-52N, 075-26-24W.

⁴ The protected contour for Channel 62 is the F(50,90) 42.85 dBu while for Channel 39 it is the F(50,90) 41.11 dBu.

In order to more closely duplicate the Appendix B proposed Channel 39 coverage of WLVT-DT at its presently licensed site, the ERP at the licensed site must be increased 1 dB to 63 kW from that proposed in Appendix B of the 7th R&O and the FCC staff generated directional pattern (ANT ID 74699) also modified slightly. These changes come about for four reasons. First the allotted and proposed tower coordinates are slightly different. Second, the HAAT calculations are different in some azimuths due to the new tower location. Third, the WLVT-DT operation proposed herein must meet the current DTV freeze in that the distance to the contours at any azimuth must not be extended, and fourth, there can be no increased interference to any other facility greater than 0.1%. A Longley-Rice study was commissioned by this office to determine the extent of any additional caused interference. First, a study was run utilizing the FCC ANT ID 74699 antenna parameters at 63 kW with the following results.

TABLE 1 – LONGLEY-RICE TABULATION

STATION	ALLOTMENT POPULATION	NEW SITE 49 kW POPULATION	NEW SITE 63 kW POPULATION	% CHANGE FROM ALLOT
WMAR	0%	0%	0%	0%
WWOR	0.0548%	0.0058%	0.0607%	+ 0.0059%
WSWB	0.1286%	0%	0.1095%	- 0.0191%
WCTX	0.0950%	0.0054%	0.0346%	- 0.0604%
WSBK	0%	0%	0%	0%
WJAL	2.6427%	0.9378%	3.8047%	+ 1.162%
WIVB	0%	0%	0%	0%
WNUV	0%	0%	0%	0%
WXTU	0.0348%	0%	0.0296%	- 0.0052%

The only affected station under the 0.1% maximum incremental interference criteria was WJAL-DT, Channel 39 in Hagerstown, MD.

Next the distance to contours was checked every 10 degrees and power was adjusted downward as needed by modifying the antenna azimuth pattern to insure that the WLVT-DT proposed 41.11 dBu F(50,90) contour did not exceed the allotted distance to contours rounded to the nearest whole kilometer.

Finally, the Longley-Rice data was analyzed on a per grid basis with the following results.

The allotted interference to WJAL-DT was 2.6427% or 22,109 persons.

The predicted interference at 63 kW to WJAL was 3.8047% or 31,830 persons.

The increase of 1.162% equates to 9,721 persons. A ratio these two percentages equates to 1% interference at 8,366 persons. Therefore 0.1% of the total is 837 persons. The required reduction then is $9,721 - 837 = 8,884$ persons.

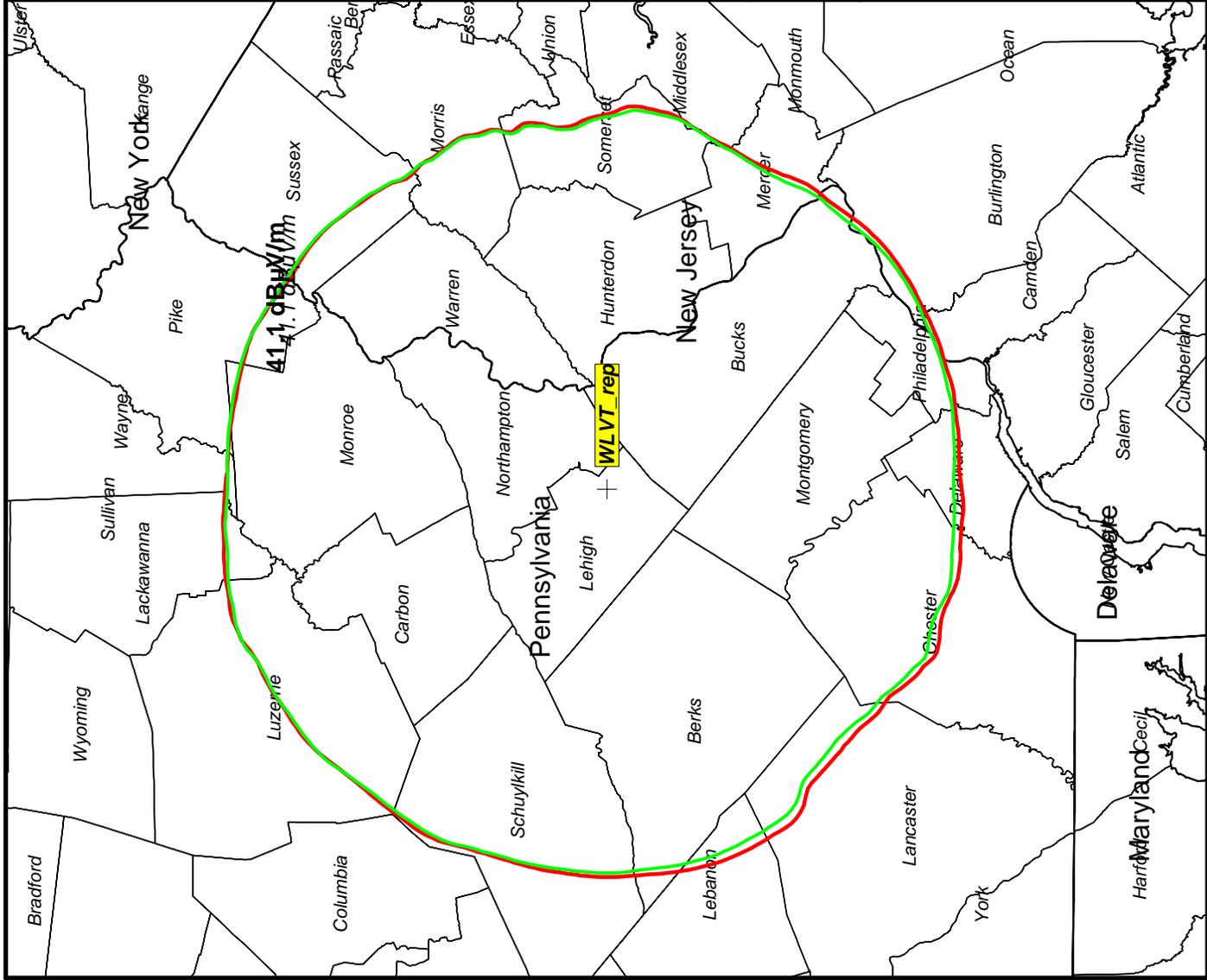
The interference to WJAL-DT occurs along an arc extending from the WLVT-TV transmitter site towards WJAL-DT between approximately 230 through 270 degrees. An analysis of the Longley-Rice cell data showed that by reducing transmitter power by 1.56 dB over the arc from 230 through 270 degrees reduced the new interference by 9,165 persons thus meeting the less than 0.1% requirement.

As shown in Figure 1, utilizing 63 kW ERP at the presently licensed HAAT of 294 meters results in a nearly identical 41.11 dBu contour plot for both cases. Table 2 is a tabulation of the proposed directional antenna pattern for WLVT-DT. Table 3 is a tabulation of the Appendix B WLVT-DT distances to contours. Table 4 is a tabulation of the proposed WLVT-DT 63 kW ERP distances to contours.

Respectfully submitted,



Larry H. Will, P.E.
08 November 2007



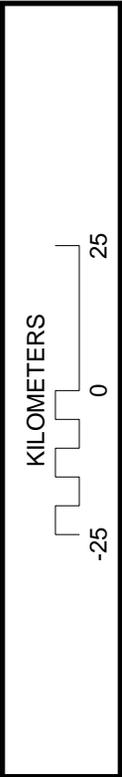
SIGNAL™: wlvtdt_allocate_vrs_actual.map

Sites
 Site: WLVDT_rep
 N40°33'58.00" W75°26'06.00" 281.0 m
 WLVDT_rep Tx.Ht.AGL: 171.0 m Total ERPd: 16.99dBkW
 Grp: 1 directional-horizontal/0.0° 623.3000 MHz

Interference contour study
 Propagation methods:
 service contour : FCC-FCC 90.0%

= 41.1 dBµV/m service contour
 WLVDT_39_at_63kW

Notes
 Plot of service contours for WLVDT-DT showing the 50 kW Appendix B B replication on NTSC tower at 302 M HAAT (GREEN) and the 63 kW proposal on the WFMZDT tower at 195 M (RED).
 DTV at 41.11 dBu F(50,90)
 HAATs within 1 meter. 302 vrs 194 actual.
 prepared by
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COVERAGE MAP
 WLVDT-DT CH 39

Figure 5
 10/29/2007

**WLVT-DT PROPOSED AZIMUTH PATTERN
ALLENTOWN PA**

TABLE 2

10 Degree

Angle	Field	ERP (kW)	ERP (dBk)
0	0.944	56.14	17.493
10	0.989	61.62	17.897
20	0.989	61.62	17.897
30	0.990	61.75	17.906
40	0.990	61.75	17.906
50	0.988	61.50	17.889
60	0.986	61.25	17.871
70	0.966	58.79	17.693
80	0.966	58.79	17.693
90	0.944	56.14	17.493
100	0.955	57.46	17.593
110	0.955	57.46	17.593
120	0.902	51.26	17.098
130	0.955	57.46	17.593
140	0.966	58.79	17.693
150	0.966	58.79	17.693
160	0.966	58.79	17.693
170	0.871	47.79	16.794
180	0.861	46.70	16.693
190	0.881	48.90	16.893
200	0.966	58.79	17.693
210	0.933	54.84	17.391
220	0.887	49.51	16.947
230	0.787	39.02	15.913
240	0.794	39.70	15.988
250	0.801	40.46	16.070
260	0.806	40.95	16.122
270	0.830	43.37	16.372
280	0.939	55.60	17.450
290	0.989	61.62	17.897
300	0.955	57.46	17.593
310	1.000	63.00	17.993
320	0.977	60.14	17.791
330	0.977	60.14	17.791
340	0.944	56.14	17.493
350	0.901	51.14	17.088

Cardinal

Angle	Field	ERP (kW)	ERP (dBk)
0	0.944	56.14	17.493
45	0.989	61.62	17.897
90	0.944	56.14	17.493
135	0.961	58.18	17.648
180	0.861	46.70	16.693
225	0.870	47.68	16.784
270	0.873	48.01	16.814
315	1.000	63.00	17.993

Maxima

Angle	Field	ERP (kW)	ERP (dBk)
313	1.000	63.00	17.993
314	1.000	63.00	17.993
315	1.000	63.00	17.993
316	1.000	63.00	17.993
317	1.000	63.00	17.993
318	1.000	63.00	17.993
319	1.000	63.00	17.993

Minima

Angle	Field	ERP (kW)	ERP (dBk)
230	0.787	39.02	15.913

TABLE 3

WLVT-DT APPENDIX B CONTOURS

EDX contour file 0.000 360.000 10.000 -1.000 452.00 4 0.000
 WLVT_rep 46.990 623.3000 40.566111 -75.435000 1 1 41.1 -999.0
 -999.0 -999.0 -999.0 90 90 90 90 90 8 8 8 8 8 1 1 1 1 1 145.7
 50 1 1.8F:\Program Files\Edx Engineering\SIGNAL(tm)
 6.2\pat\DIE_74699.PAT
 DISTANCES TO CONTOURS (Kilometers):
 Antenna COR elevation (AMSL): 452 mtrs Average HAAT: 302 mtrs
 Frequency: 623.3000 MHz
 Coordinates: N 40 33 58.00 W 75 26 6.00
 F(50,90) Curves Number of Contours: 1 8

AZ (degs)	HAAT (m)	ERPd (kW)	CONTOUR LEVELS (dBu): 41.1
0.0	325	49.0084	76.0
10.0	332	49.0084	76.7
20.0	340	49.0084	77.5
30.0	332	49.1074	76.7
40.0	334	49.1074	76.9
50.0	321	49.9035	75.8
60.0	312	48.7118	74.9
70.0	315	48.3178	75.0
80.0	298	48.0233	73.6
90.0	307	47.7297	74.3
100.0	320	47.3397	75.3
110.0	281	46.8544	72.0
120.0	268	46.5644	70.9
130.0	279	46.2754	71.8
140.0	292	45.8914	72.8
150.0	286	45.6044	72.3
160.0	277	45.3183	71.5
170.0	262	45.0331	70.4
180.0	248	44.7489	69.4
190.0	260	44.5598	70.2
200.0	266	44.3712	70.5
210.0	274	44.2771	71.1
220.0	242	44.1830	68.9
230.0	237	44.4655	68.6
240.0	306	45.1281	73.9
250.0	326	46.0832	75.8
260.0	330	47.7297	76.4
270.0	331	49.4052	76.6
280.0	328	49.6042	76.4
290.0	328	49.7039	76.5
300.0	336	49.9035	77.2
310.0	332	50.0034	76.9
320.0	345	50.0034	78.1
330.0	345	49.8036	78.1
340.0	356	49.5047	79.1
350.0	336	49.3058	77.1
360.0	325	49.0084	76.0

TABLE 4

WLVT-DT PROPOSED 63 KW CONTOURS

EDX contour file 0.000 360.000 10.000 -1.000 442.00 4 0.000
 WLVTpro 47.990 623.3000 40.564444 -75.440000 1 1 41.1 -999.0
 -999.0 -999.0 -999.0 90 90 90 90 90 8 8 8 8 8 1 1 1 1 1 145.6
 50 1 1.8F:\Program Files\Edx Engineering\SIGNAL(tm)
 6.2\pat\DIE_74699_mod.PAT
 DISTANCES TO CONTOURS (Kilometers):
 Antenna COR elevation (AMSL): 442 mtrs Average HAAT: 294 mtrs
 Frequency: 623.3000 MHz
 Coordinates: N 40 33 52.00 W 75 26 24.00
 F(50,90) Curves Number of Contours: 1 8

AZ (degs)	HAAT (m)	ERPd (kW)	CONTOUR LEVELS (dBu): 41.1
0.0	320	56.0975	76.4
10.0	320	61.5733	77.0
20.0	329	61.5733	77.9
30.0	323	61.5733	77.3
40.0	323	61.6979	77.3
50.0	310	61.4488	76.0
60.0	299	61.2003	75.0
70.0	304	58.7427	75.3
80.0	288	58.7427	73.8
90.0	297	56.0975	74.4
100.0	307	57.4125	75.4
110.0	267	57.4125	72.0
120.0	264	51.2168	71.2
130.0	272	57.4125	72.4
140.0	281	58.7427	73.2
150.0	271	58.7427	72.4
160.0	261	58.7427	71.6
170.0	248	47.7569	69.7
180.0	245	46.6666	69.4
190.0	255	48.8598	70.3
200.0	252	58.7427	71.0
210.0	259	54.7978	71.2
220.0	229	52.3588	68.9
230.0	232	43.1579	68.2
240.0	301	40.4901	72.8
250.0	318	43.3667	74.7
260.0	321	42.4313	74.8
270.0	320	47.9765	75.4
280.0	316	52.3588	75.7
290.0	316	61.5733	76.7
300.0	327	57.4125	77.3
310.0	320	62.9506	77.2
320.0	334	60.0881	78.3
330.0	335	60.0881	78.3
340.0	346	56.0975	79.0
350.0	334	51.1034	77.2
360.0	320	56.0975	76.4