

ENGINEERING EXHIBIT

Amendment to Application for Digital Television Station Construction Permit BPCDT-20080619ABE prepared for

Detroit Television Station WKBD Inc.
WKBD-TV Detroit, MI
Facility ID 51570
Ch. 14 385 kW 294 m

Detroit Television Station WKBD Inc. (“WKBD”) is the licensee of television station WKBD-TV, digital Channel 14, Detroit, MI. The WKBD-TV facility is licensed with an effective radiated power (“ERP”) of 180 kW at 269 meters antenna height above average terrain (“HAAT”), with a side-mounted antenna (BLCDT-20090202AHW). An application is pending (BPCDT-20080619ABE) for a Construction Permit (“CP”) to expand the WKBD-TV facility to 370 kW ERP and 294 meters antenna HAAT utilizing a top-mount antenna.

FCC Staff has informally advised that the pending application was objected to by Canada on the basis of interference to the analog operation and post-transition digital allotment on Channel 14 at London ON. *WKBD* herein amends the pending CP application to specify use of a directional antenna to provide suppression towards Channel 14 at London, ON. As amended herein, the maximum ERP is 385 kW ERP while maintaining the originally proposed site and 294 m HAAT.

The proposed WKBD-TV antenna system, a Dielectric model TFU-20ETT/VP-R 4C130, will be top-mounted in place of the existing pre-transition analog Channel 50 (no longer in use) antenna on the tower structure. Elliptical polarization is proposed (72.4 percent vertical polarization). The proposed maximum horizontally polarized ERP is 385 kW and the maximum vertically polarized ERP is 279 kW. The vertically polarized component will not exceed the horizontally polarized component at any azimuth. The directional antenna’s azimuthal patterns are

depicted in Figures 1 and 1A for horizontal and vertical polarization, respectively. The antenna's elevation pattern is depicted in Figures 2 and 2A.

The antenna will be installed on the existing WKBD-TV antenna supporting structure (FCC Antenna Structure Registration number 1007996). No change to the overall structure height will result from this proposal.

A map is supplied as Figure 3 which depicts the standard predicted coverage contours. This map includes the location of Detroit, WKBD-TV's principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1) as the entire principal community will be encompassed by the 48 dBμ contour.

The proposed WKBD-TV facility's predicted service population provides a 110.1 percent match of the MB Docket 87-268 Seventh Report and Order Appendix B facility, as detailed in the following table.

Digital Television Population Summary		
Population Summary (2000 Census)		
OET Bulletin 69 method	Appendix B	Proposed
Within Noise Limited Contour	5,129,522	5,666,209
Not affected by terrain losses	5,129,522	5,666,166
Lost to all interference	6,618	23,563
Net DTV Service	5,122,904	5,642,603
Match of Appendix B	---	110.14%

The proposed facility expands the WKBD-TV service contour beyond that established by Appendix B values. A detailed interference study per OET Bulletin 69¹ shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby digital television and Class A television stations. **Pursuant to §73.616(e)(1), FCC processing of this proposal is requested on the basis of a 1 km cell size.** The interference study output report is provided as Table 1.

¹FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. **A cell size of 1 km was employed.** Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.

Canadian Allocation Considerations

The WKBD-TV transmitter site is located 27 km from the U.S. - Canadian border and is thus within the 400 km coordination zone. Table B of the 2008 written understanding² between Industry Canada and the FCC indicates that WKBD-TV's post-transition digital facility has been coordinated with Canada on digital Channel 14 at 200 kW ERP nondirectional and 526 m AMSL at the same coordinates as specified herein. The proposed WKBD-TV directional antenna (centered 524.7 m AMSL) provides suppression towards the London, ON digital Channel 14 allotment such that the ERP towards and beyond the London Channel 14 service area does not exceed the coordinated ERP of 200 kW.

The digital Channel 14 allotment at London, ON has been accepted by the FCC at 50 kW ERP and 268 m HAAT (subsequent to the 3.5 kW ERP 197.6 m HAAT facility specified in the 2008 written understanding's Table A). An ERP of 50 kW at 268 m HAAT for London does not exceed a Class C facility (75 kW / 300 m) as specified in Table 4.3.2 of the *Letter of Understanding*³ ("LOU") regarding digital television along the U.S. - Canadian Border. The LOU specifies that Class C DTV allotments have a 70 km protected coverage radius.

The map of Figure 4 depicts a 70 km radius from the London, ON Channel 14 allotment coordinates. Additionally, Figure 4 supplies the coverage contour corresponding to the Canada-approved 200 kW nondirectional WKBD-TV allotment along with the proposed WKBD-TV 385 kW directional facility. As shown on Figure 4 and in the attached Table 2, the proposed WKBD-TV 385 kW directional facility results in ERP's less than 200 kW between the azimuths of 24° T and 116° T which are along and beyond the azimuths towards the London Channel 14 allotment. Thus, protection to the London Channel 14 allotment is equivalent to or better than what would result from the implementation of a 200 kW nondirectional facility for WKBD-TV, and should not raise objection by Canada. The applicant acknowledges that due to the ERP exceeding 200 kW in directions away from Canada that further international coordination will nevertheless be necessary.

²Table B as referenced in the letter dated December 15, 2008 from Industry Canada to the FCC.

³*Letter of Understanding Between the Federal Communications Commission of the United States of America and Industry Canada Related to the Use of the 54-72 MHz, 76-88 MHz, 174-216 MHz, and 470-806 MHz Bands for the Digital Television Broadcasting Service Along the Common Border*, September 2000.

Other Allocation Considerations

The nearest FCC monitoring station is 218 km distant at Allegan, MI. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with “quiet” zones specified in §73.1030(a) and (b). There are no authorized AM stations within 3.2 kilometers of the site, based on information contained within the Commission’s database.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)


The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission’s OET Bulletin Number 65. Based on OET-65 equation (10), and considering 10 percent antenna relative field in downward elevations (pattern data shows less than 10 percent relative field at angles 15 to 90 degrees below the antenna), the calculated power density attributable to the proposed facility at locations near the transmitter site at a height of two meters above ground level is $2.3 \mu\text{W}/\text{cm}^2$, which is 0.73 percent of the “uncontrolled / general public” maximum permissible exposure limit. This is below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal’s contribution is less than five percent.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC’s guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

This exhibit is limited to the evaluation of exposure to RF electromagnetic field. The proposal involves installation of a replacement top-mounted transmitting antenna on an existing antenna support structure which was constructed prior to March 16, 2001. No change in structure height is proposed.

Certification

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.



Joseph M. Davis, P.E.
October 17, 2011

Chesapeake RF Consultants, LLC
207 Old Dominion Road
Yorktown, VA 23692
703-650-9600

List of Attachments

Figure 1, 1A	Antenna Azimuthal Pattern
Figure 2, 2A	Antenna Elevation Pattern
Figure 3	Proposed Coverage Contours
Figure 4	Canada Allotment Protection
Table 1	OET Bulletin 69 Interference Study
Table 2	Canada Allotment Protection
Form 301	Saved Version of Engineering Sections from FCC Form at Time of Upload

This material was entered October 17, 2011 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's account number and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.

Proposal Number	C- 04856		
Date	27-Sep-11		
Call Letters	WKBD	Channel	14
Location	Detroit, MI		
Customer			
Antenna Type	TFU-20ETT/VP-R 4C130		

AZIMUTH PATTERN

Gain **1.30** **(1.14 dB)**
 Calculated / Measured **Calculated**

Frequency **473.00 MHz**
 Drawing # **4C130-HPOL**

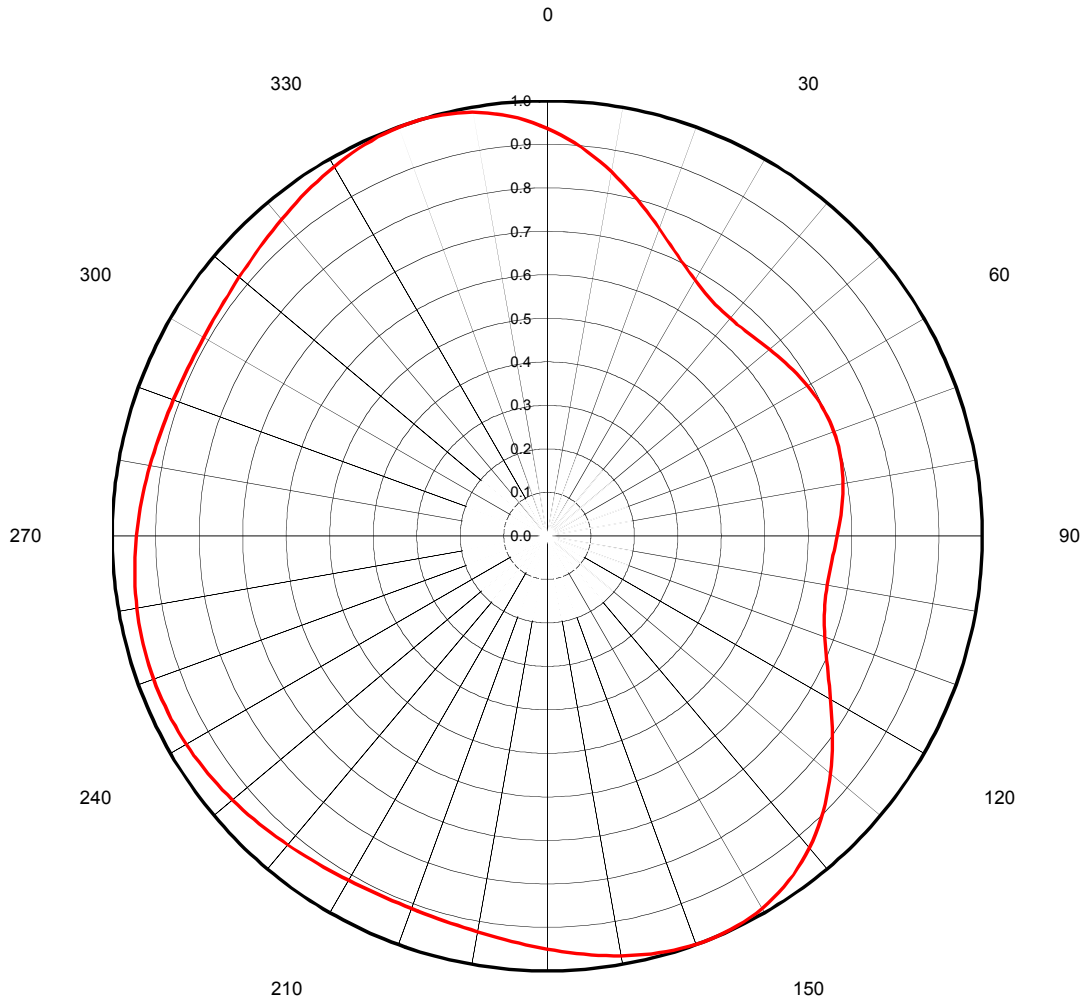


Figure 1
Antenna Azimuthal Pattern
Horizontal Polarization
WKBD-TV Detroit, MI
Facility ID 51570
Ch. 14 385 kW 294 m

prepared for
Detroit Television
Station WKBD Inc.

October, 2011

Proposal Number **C- 04856**
 Date **27-Sep-11**
 Call Letters **WKBD** Channel **14**
 Location **Detroit, MI**
 Customer
 Antenna Type **TFU-20ETT/VP-R 4C130**

AZIMUTH PATTERN/VERTICAL POLARIZATION

Gain **1.70 (2.30 dB)** Frequency **473.00 MHz**
 Calculated / Measured **Calculated** Drawing # **4C130-VPOL**
 0

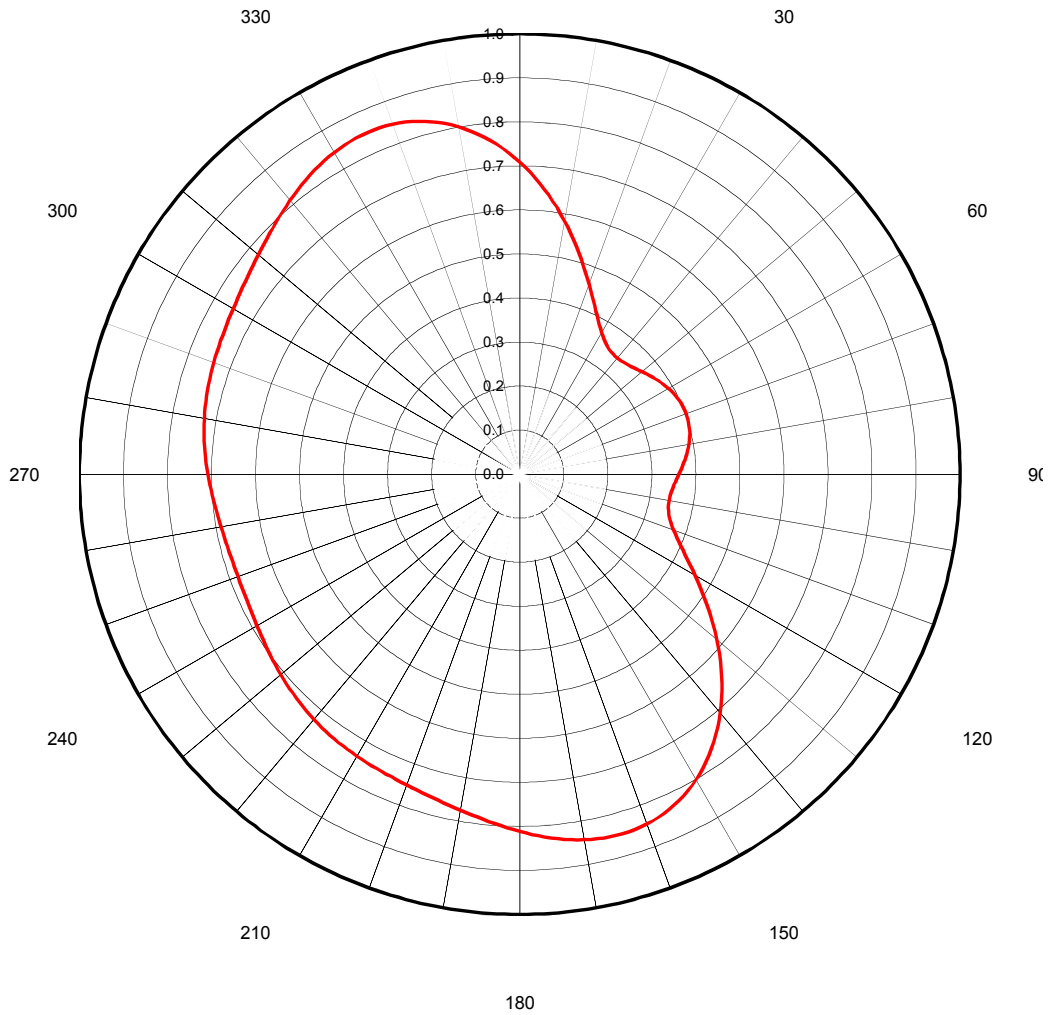


Figure 1A
Antenna Azimuthal Pattern
Vertical Polarization
WKBD-TV Detroit, MI
Facility ID 51570
Ch. 14 385 kW 294 m

prepared for
Detroit Television
Station WKBD Inc.

October, 2011



Proposal Number **C- 04856**
Date **27-Sep-11**
Call Letters **WKBD** Channel **14**
Location **Detroit, MI**
Customer
Antenna Type **TFU-20ETT/VP-R 4C130**

ELEVATION PATTERN

RMS Gain at Main Lobe	18.00 (12.55 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	14.70 (11.67 dB)	Frequency	473.00 MHz
Calculated / Measured	Calculated	Drawing #	20E180075-90

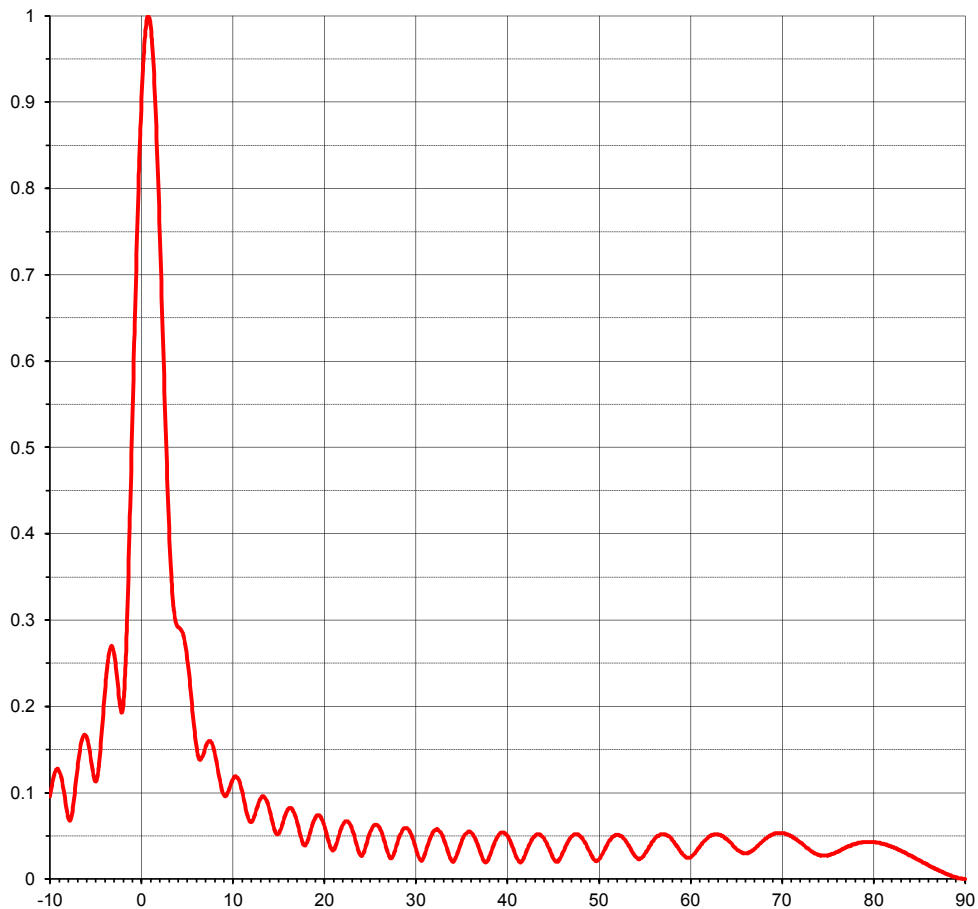


Figure 2
Antenna Elevation Pattern
WKBD-TV Detroit, MI
Facility ID 51570
Ch. 14 385 kW 294 m

prepared for
Detroit Television
Station WKBD Inc.

October, 2011





Proposal Number **C- 04856**
Date **27-Sep-11**
Call Letters **WKBD** Channel **14**
Location **Detroit, MI**
Customer
Antenna Type **TFU-20ETT/VP-R 4C130**

ELEVATION PATTERN

RMS Gain at Main Lobe	18.00 (12.55 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	14.70 (11.67 dB)	Frequency	473.00 MHz
Calculated / Measured	Calculated	Drawing #	20E180075

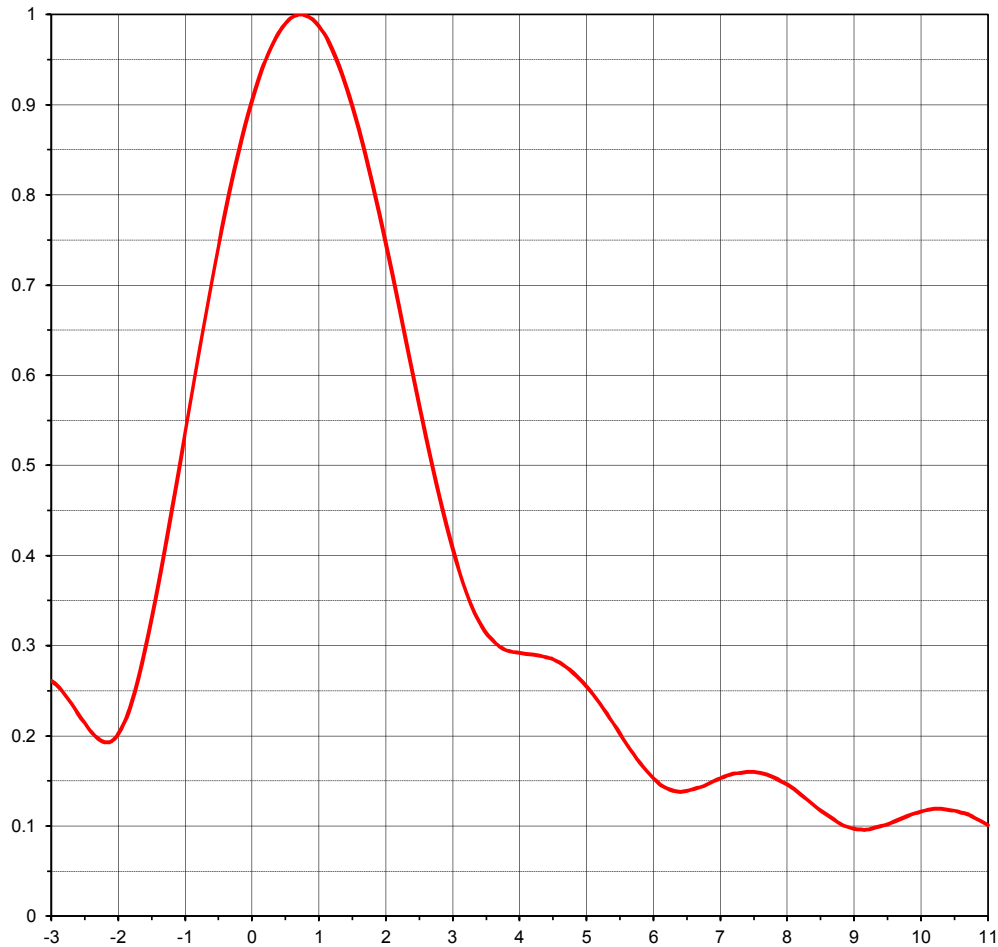
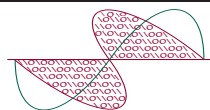


Figure 2A
Antenna Elevation Pattern - Detail
WKBD-TV Detroit, MI
Facility ID 51570
Ch. 14 385 kW 294 m

prepared for
Detroit Television
Station WKBD Inc.

October, 2011



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 3
Proposed Coverage Contours
WKBD-TV Detroit, MI
Facility ID 51570
Ch. 14 385 kW 294 m

prepared for
Detroit Television
Station WKBD Inc.

October, 2011

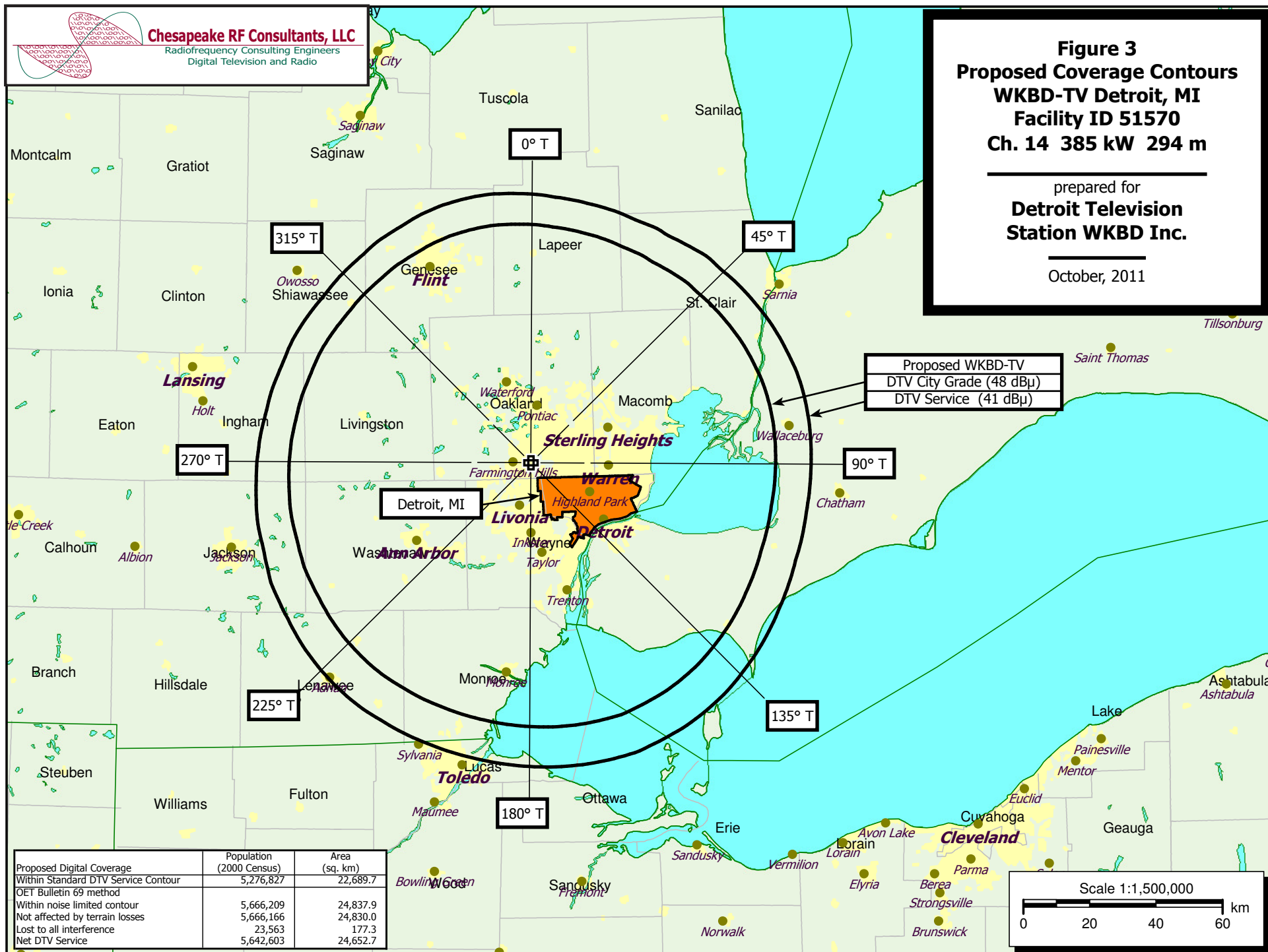


Figure 4
Canada Allotment Protection
WKBD-TV Detroit, MI
Facility ID 51570
Ch. 14 385 kW 294 m

prepared for
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October, 2011

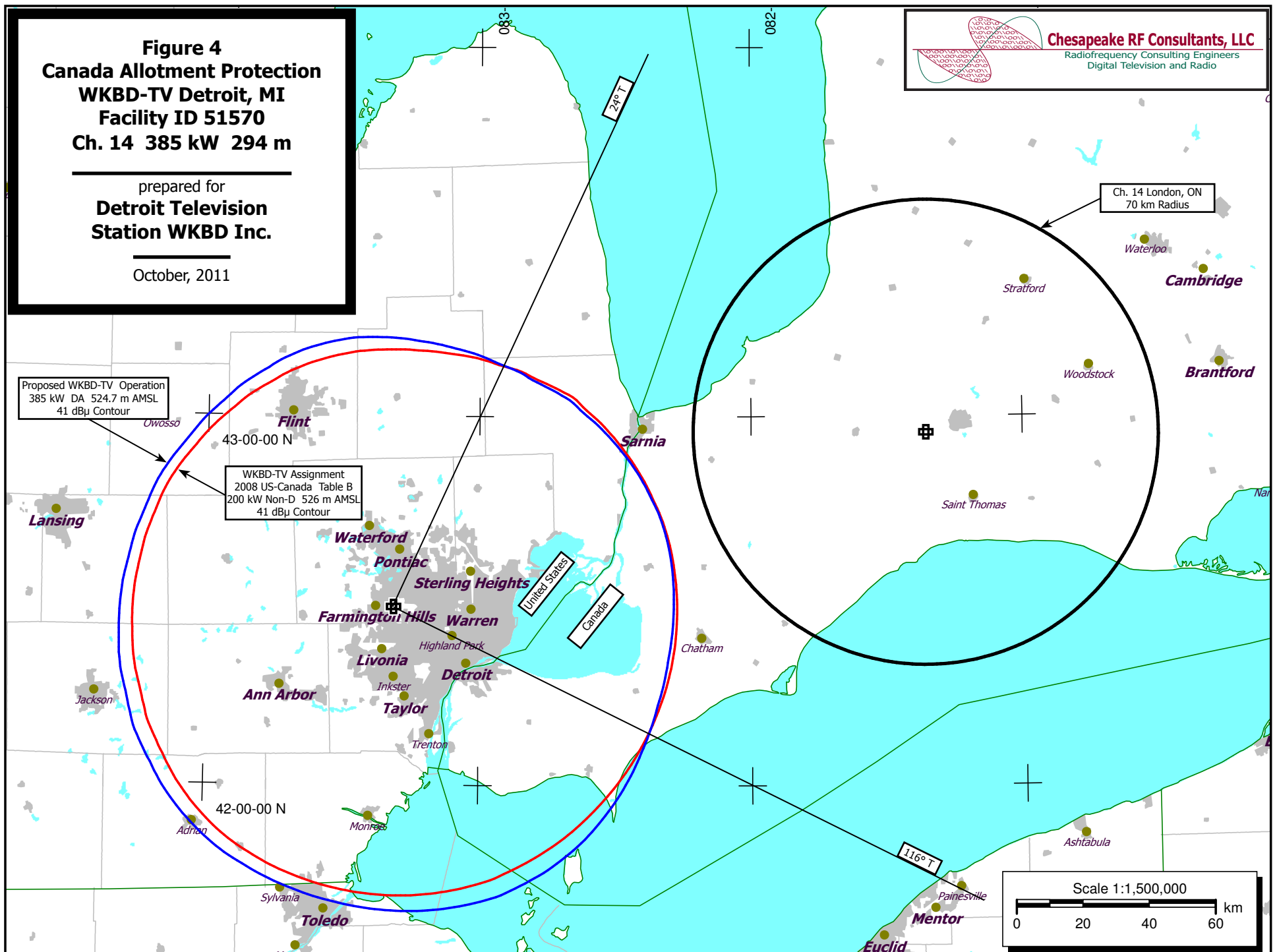


Table 1 WKBD-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 1 of 6)

TW Census data selected 2000

Data Base Selected

/space/software/cdbs/pt_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 10-17-2011 Time: 11:58:30

Record Selected for Analysis

WKBD-TV USERRECORD-01 DETROIT MI US
Channel 14 ERP 385. kW HAAT 294. m RCAMSL 00525 m
Latitude 042-29-01 Longitude 0083-18-44
Status APP Zone 1 Border Site number: 01
Dir Antenna Make usr Model WKBD_4C130 Beam tilt N Ref Azimuth 0.

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility (site # 01) meets maximum height/power limits

Site number	1		
Azimuth	ERP	HAAT	41.0 dBu F(50,90)
(Deg)	(kW)	(m)	(km)
0.0	338.018	250.1	80.7
45.0	167.706	299.1	81.6
90.0	171.282	320.3	84.1
135.0	307.362	328.3	89.6
180.0	347.462	334.4	91.3
225.0	337.297	313.2	88.6
270.0	343.815	261.9	81.9
315.0	338.018	244.9	80.3

Evaluation toward Class A Stations from site # 01

Contour overlap to Class A station
WOBC-CA 14 BATTLE CREEK MI BLTTA 20021206AAN

Class A Evaluation Complete

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance
Distance to border = 27.3km

Table 1 WKBD-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 2 of 6)

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station	City/State	ARN
14	WKBD-TV	DETROIT MI	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	WOBC-CA	BATTLE CREEK MI	153.7	CP	BDFCDTA	20060331AWA
14	WOBC-CA	BATTLE CREEK MI	153.7	LIC	BLTTA	20021206AAN
14	WUTV	BUFFALO NY	362.8	LIC	BLCDT	20060829BGK
14	WCMH-TV	COLUMBUS OH	280.3	LIC	BLCDT	20050823AAD
15	WDCQ-TV	BAD AXE MI	121.0	LIC	BLEDT	20030922ABG
15	WXSP-CD	GRAND RAPIDS MI	206.8	LIC	BLDTA	20100714AAG
15	WEWS-TV	CLEVELAND OH	180.5	LIC	BLCDT	20091211ACS

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
14	WOBC-CA	BATTLE CREEK MI	BDFCDTA	-20060331AWA

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	WTIU	BLOOMINGTON IN	367.2	CP	BPEDT	-20080620ACT
14	WTIU	BLOOMINGTON IN	367.2	LIC	BLEDT	-20030925AVS
14	W14DS-S	FORT WAYNE IN	140.8	CP	BNPDTL	-20091228AAV
14	WKBD	DETROIT MI	153.7	PLN	DTVPLN	-DTVP0482
14	WCMH-TV	COLUMBUS OH	313.6	LIC	BLCDT	-20050823AAD
14	WKBD-TV	DETROIT MI	153.7	APP	USERRECORD-01	

Proposal causes no interference

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
14	WOBC-CA	BATTLE CREEK MI	BLTTA	-20021206AAN

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	WTIU	BLOOMINGTON IN	367.2	CP	BPEDT	-20080620ACT
14	WTIU	BLOOMINGTON IN	367.2	LIC	BLEDT	-20030925AVS
14	WKBD	DETROIT MI	153.7	PLN	DTVPLN	-DTVP0482
14	WCMH-TV	COLUMBUS OH	313.6	LIC	BLCDT	-20050823AAD
16	WSMH	FLINT MI	136.9	CP	BPCDT	-20051115ADO

Table 1 WKBD-TV OET Bulletin 69 Interference Study

(worst-case scenarios shown page 3 of 6)

16	WSMH	FLINT MI	136.9	LIC	BLCDT	-20090804ABG
16	WSMH	FLINT MI	137.8	CP	BPCDT	-19991028ACK
18	WISE-DR	FORT WAYNE IN	131.8	APP	BPRM	-20080820AHU
18	WISE-TV	FORT WAYNE IN	131.8	LIC	BLCDT	-20091103ACK
22	WSBT-TV	SOUTH BEND IN	114.6	LIC	BLCDT	-20090224ABF
28	WSJV	ELKHART IN	113.2	LIC	BLCDT	-20100115AAE
14	WKBD-TV	DETROIT MI	153.7	APP	USERRECORD-01	
Proposal causes no interference						

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
14	WUTV	BUFFALO NY	BLCDT -20060829BGK

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	WKBD	DETROIT MI	362.8	PLN	DTVPLN -DTVPO482
14	WFBT	BATH NY	160.6	CP MOD	BMPCDT -20090327AEF
15	WPSU-TV	CLEARFIELD PA	215.3	LIC	BLEDT -20080703AFB
15	WPSU-TV	CLEARFIELD PA	215.3	CP MOD	BMPEDT -20090909ABR
14	WKBD-TV	DETROIT MI	362.8	APP	USERRECORD-01
15	WPSU-TV	CLEARFIELD PA		CP MOD	BMPEDT -20090909ABR
Proposal causes no interference					

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application Ref. No.
14	WCMH-TV	COLUMBUS OH	BLCDT -20050823AAD

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	WTIU	BLOOMINGTON IN	311.1	CP	BPEDT -20080620ACT
14	WTIU	BLOOMINGTON IN	311.1	LIC	BLEDT -20030925AVS
14	WKSO-TV	SOMERSET KY	348.5	LIC	BLEDT -20020304ALK
14	WKBD	DETROIT MI	280.3	PLN	DTVPLN -DTVPO482
15	WKMR	MOREHEAD KY	202.0	LIC	BLEDT -20020201ABI
15	WEWS-TV	CLEVELAND OH	191.1	LIC	BLCDT -20091211ACS
14	WKBD-TV	DETROIT MI	280.3	APP	USERRECORD-01

Total scenarios = 2

Result key: 2
Scenario 2 Affected station 4
Before Analysis

Results for: 14A OH COLUMBUS	BLCDT	20050823AAD	LIC
HAAT 264.0 m, ATV ERP 902.0 kW			
POPULATION	AREA (sq km)		
within Noise Limited Contour 2522904	29028.3		
not affected by terrain losses 2484652	28256.3		

Table 1 WKBD-TV OET Bulletin 69 Interference Study

(worst-case scenarios shown page 4 of 6)

lost to NTSC IX	0	0.0
lost to additional IX by ATV	10262	92.3
lost to ATV IX only	10262	92.3
lost to all IX	10262	92.3

Potential Interfering Stations Included in above Scenario 2

14A IN BLOOMINGTON	BLEDT	20030925AVS	LIC
14A KY SOMERSET	BLEDT	20020304ALK	LIC
14A MI DETROIT	DTVPLN	DTVPO482	PLN

After Analysis

Results for: 14A OH COLUMBUS	BLCDT	20050823AAD	LIC
HAAT 264.0 m, ATV ERP 902.0 kW			

	POPULATION	AREA (sq km)
within Noise Limited Contour	2522904	29028.3
not affected by terrain losses	2484652	28256.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	22521	371.2
lost to ATV IX only	22521	371.2
lost to all IX	22521	371.2

Potential Interfering Stations Included in above Scenario 2

14A IN BLOOMINGTON	BLEDT	20030925AVS	LIC
14A KY SOMERSET	BLEDT	20020304ALK	LIC
14A MI DETROIT	USERRECORD01		APP

Percent new IX = 0.4954%

Worst case new IX 0.4954% Scenario 2

#####

Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
15	WDCQ-TV	BAD AXE MI	BLEDT -20030922ABG

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	WKBD	DETROIT MI	121.0	PLN	DTVPLN -DTVPO482
15	WEWS-TV	CLEVELAND OH	288.9	LIC	BLCDT -20091211ACS
16	WSMH	FLINT MI	48.7	CP	BPCDT -20051115ADO
16	WSMH	FLINT MI	48.7	LIC	BLCDT -20090804ABG
16	WSMH	FLINT MI	47.8	CP	BPCDT -19991028ACK
14	WKBD-TV	DETROIT MI	121.0	APP	USERRECORD-01

Total scenarios = 3

Result key: 3
Scenario 1 Affected station 5
Before Analysis

Results for: 15A MI BAD AXE	BLEDT	20030922ABG	LIC
HAAT 309.0 m, ATV ERP 200.0 kW			

Table 1 WKBD-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 5 of 6)

	POPULATION	AREA (sq km)
within Noise Limited Contour	1283537	24214.6
not affected by terrain losses	1283537	24214.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	20515	471.6
lost to ATV IX only	20515	471.6
lost to all IX	20515	471.6
Potential Interfering Stations Included in above Scenario 1		
15A OH CLEVELAND	BLCDDT	20091211ACS LIC
16A MI FLINT	BPCDDT	20051115ADO CP
14A MI DETROIT	DTVPLN	DTVP0482 PLN
After Analysis		
Results for: 15A MI BAD AXE	BLEDT	20030922ABG LIC
HAAT 309.0 m, ATV ERP 200.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	1283537	24214.6
not affected by terrain losses	1283537	24214.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	26341	522.3
lost to ATV IX only	26341	522.3
lost to all IX	26341	522.3
Potential Interfering Stations Included in above Scenario 1		
15A OH CLEVELAND	BLCDDT	20091211ACS LIC
16A MI FLINT	BPCDDT	20051115ADO CP
14A MI DETROIT	USERRECORD01	APP
Percent new IX =	0.4613%	
Worst case new IX	0.4613% Scenario	1
#####		

Analysis of Interference to Affected Station 6

Analysis of current record			
Channel	Call	City/State	Application Ref. No.
15	WXSP-CD	GRAND RAPIDS MI	BLDTA -20100714AAG
Stations Potentially Affecting This Station			
Chan	Call	City/State	Dist(km) Status Application Ref. No.
15	WDCQ-TV	BAD AXE MI	178.2 LIC BLEDT -20030922ABG
15	WEWS-TV	CLEVELAND OH	378.1 LIC BLEDT -20091211ACS
14	WKBD-TV	DETROIT MI	206.8 APP USERRECORD-01
Proposed station is beyond the site to nearest cell evaluation distance			
#####			

Analysis of Interference to Affected Station 7

Table 1 WKBD-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 6 of 6)

Analysis of current record				
Channel	Call	City/State	Application	Ref. No.
15	WEWS-TV	CLEVELAND OH	BLCDDT	-20091211ACS
Stations Potentially Affecting This Station				
Chan	Call	City/State	Dist(km)	Status Application Ref. No.
14	WKBD	DETROIT MI	180.5	PLN DTVPLN -DTVP0482
14	WCMH-TV	COLUMBUS OH	191.1	LIC BLCDDT -20050823AAD
15	WKMR	MOREHEAD KY	383.4	LIC BLEDDT -20020201ABI
15	WDCQ-TV	BAD AXE MI	288.9	LIC BLEDDT -20030922ABG
15	WPSU-TV	CLEARFIELD PA	275.2	LIC BLEDDT -20080703AFB
15	WPSU-TV	CLEARFIELD PA	328.3	CP MOD BMPEDT -20090909ABR
15	WPSU-TV	CLEARFIELD PA	275.2	CP MOD BMPEDT -20090909ABR
16	WSEE-TV	ERIE PA	161.5	CP MOD BMPCDDT -20050216ACD
14	WKBD-TV	DETROIT MI	180.5	APP USERRECORD-01
Proposal causes no interference				
#####				
Analysis of Interference to Affected Station 8				
Analysis of current record				
Channel	Call	City/State	Application	Ref. No.
14	WKBD-TV	DETROIT MI	USERRECORD-01	
Stations Potentially Affecting This Station				
Chan	Call	City/State	Dist(km)	Status Application Ref. No.
14	WUTV	BUFFALO NY	362.8	LIC BLCDDT -20060829BGK
14	WCMH-TV	COLUMBUS OH	280.3	LIC BLCDDT -20050823AAD
15	WDCQ-TV	BAD AXE MI	121.0	LIC BLEDDT -20030922ABG
15	WEWS-TV	CLEVELAND OH	180.5	LIC BLCDDT -20091211ACS
Total scenarios = 1				

Result key: 6
Scenario 1 Affected station 8
Before Analysis

Results for: 14A MI DETROIT	USERRECORD01	APP
HAAT 294.0 m, ATV ERP 385.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	5666209	24837.9
not affected by terrain losses	5666166	24830.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	23563	177.3
lost to ATV IX only	23563	177.3
lost to all IX	23563	177.3
Potential Interfering Stations Included in above Scenario 1		
14A OH COLUMBUS	BLCDDT	20050823AAD LIC
15A MI BAD AXE	BLEDDT	20030922ABG LIC
#####		

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

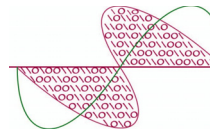
Table 2

Canada Allotment Protection

prepared for

Detroit Television Station WKBD Inc.

WKBD-TV Detroit, MI



Chesapeake RF Consultants, LLC

Radiofrequency Consulting Engineers
Digital Television and Radio

Azimuth (°T)	Antenna Relative Field	ERP (kW)	
0	0.937	338.0	
10	0.850	278.2	
20	0.752	217.7	
24	0.718	198.5	Proposed ERP is less than 200 kW from 24°T to 116 °T, which encompasses all azimuths towards the Ch. 14 London 70 km protected radius
30	0.679	177.5	
40	0.653	164.2	
50	0.667	171.3	
60	0.690	183.3	
70	0.701	189.2	
80	0.690	183.3	
90	0.667	171.3	
100	0.653	164.2	
110	0.679	177.5	
116	0.718	198.5	
120	0.752	217.7	
130	0.850	278.2	
140	0.937	338.0	
150	0.989	376.6	
158	1.000	385.0	
160	0.999	384.2	
170	0.980	369.8	
180	0.950	347.5	
190	0.924	328.7	
200	0.912	320.2	
210	0.914	321.6	
220	0.928	331.6	
230	0.944	343.1	
240	0.958	353.3	
250	0.963	357.0	
260	0.958	353.3	
270	0.945	343.8	
280	0.928	331.6	
290	0.914	321.6	
300	0.912	320.2	
310	0.924	328.7	
320	0.950	347.5	
330	0.980	369.8	
340	0.999	384.2	
342	1.000	385.0	
350	0.989	376.6	

SECTION III-D - DTV Engineering	
Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.	
<p>Pre-Transition Certification Checklist: An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction permit application to change pre-transition facilities. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.</p> <p>Post-Transition Expedited Processing. An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed within 45 days of the effective date of Section 73.616 of the rules adopted in the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91.</p>	
1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:	
(a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622.	<input checked="" type="radio"/> Yes <input type="radio"/> No
(b) It will operate a pre-transition facility from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622.	<input type="radio"/> Yes <input type="radio"/> No
(c) It will operate a pre-transition facility with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622.	<input type="radio"/> Yes <input type="radio"/> No
(d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B").	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
(e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. Applicant must submit the Exhibit called for in Item 13.	<input checked="" type="radio"/> Yes <input type="radio"/> No
3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community.	<input checked="" type="radio"/> Yes <input type="radio"/> No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable.	<input checked="" type="radio"/> Yes <input type="radio"/> No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	<input checked="" type="radio"/> Yes <input type="radio"/> No

SECTION III-D - DTV Engineering	
TECHNICAL SPECIFICATIONS	
Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.	
TECH BOX	
1.	Channel Number: DTV 14 Analog TV, if any
2.	Zone: <input checked="" type="radio"/> I <input type="radio"/> II <input type="radio"/> III
3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 42 Minutes 29 Seconds 1 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 83 Minutes 18 Seconds 44 <input checked="" type="radio"/> West <input type="radio"/> East
4.	Antenna Structure Registration Number: 1007996 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA
5.	Antenna Location Site Elevation Above Mean Sea Level: 212.5 meters
6.	Overall Tower Height Above Ground Level: 320.9 meters
7.	Height of Radiation Center Above Ground Level: 312.2 meters
8.	Height of Radiation Center Above Average Terrain : 293.6 meters
9.	Maximum Effective Radiated Power (average power): 385 kW

10.	<p>Antenna Specifications:</p> <p>a. Manufacturer DIE Model TFU-20ETT/VP-R 4C130</p> <p>b. Electrical Beam Tilt: 0.75 degrees <input type="checkbox"/> Not Applicable</p> <p>c. Mechanical Beam Tilt: degrees toward azimuth degrees True <input checked="" type="checkbox"/> Not Applicable</p> <p>Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). [Exhibit 45]</p> <p>d. Polarization: <input type="radio"/> Horizontal <input type="radio"/> Circular <input checked="" type="radio"/> Elliptical</p> <p>e. Directional Antenna Relative Field Values: <input type="checkbox"/> Not applicable (Nondirectional)</p> <p>[For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.] [Relative Field Values]</p> <p style="text-align: center;">10e. Directional Antenna Relative Field Values</p> <p style="text-align: center;">[Fill in this subform for a composite directional (not off-the-shelf) antenna, only.]</p> <table border="1"><tr><td colspan="12">e. Directional Antenna Relative Field Values:</td></tr><tr><td colspan="12">Rotation (Degrees): <input checked="" type="checkbox"/> No Rotation</td></tr><tr><td>Degrees</td><td>Value</td><td>Degrees</td><td>Value</td><td>Degrees</td><td>Value</td><td>Degrees</td><td>Value</td><td>Degrees</td><td>Value</td><td>Degrees</td><td>Value</td></tr><tr><td>0</td><td>0.937</td><td>10</td><td>0.85</td><td>20</td><td>0.752</td><td>30</td><td>0.679</td><td>40</td><td>0.653</td><td>50</td><td>0.667</td></tr><tr><td>60</td><td>0.69</td><td>70</td><td>0.701</td><td>80</td><td>0.69</td><td>90</td><td>0.667</td><td>100</td><td>0.653</td><td>110</td><td>0.679</td></tr><tr><td>120</td><td>0.752</td><td>130</td><td>0.85</td><td>140</td><td>0.937</td><td>150</td><td>0.989</td><td>160</td><td>0.999</td><td>170</td><td>0.98</td></tr><tr><td>180</td><td>0.95</td><td>190</td><td>0.924</td><td>200</td><td>0.912</td><td>210</td><td>0.914</td><td>220</td><td>0.928</td><td>230</td><td>0.944</td></tr><tr><td>240</td><td>0.958</td><td>250</td><td>0.963</td><td>260</td><td>0.958</td><td>270</td><td>0.945</td><td>280</td><td>0.928</td><td>290</td><td>0.914</td></tr><tr><td>300</td><td>0.912</td><td>310</td><td>0.924</td><td>320</td><td>0.95</td><td>330</td><td>0.98</td><td>340</td><td>0.999</td><td>350</td><td>0.989</td></tr><tr><td colspan="2">Additional Azimuths</td><td>158</td><td>1</td><td>342</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <p style="text-align: center;">Relative Field Polar Plot</p>	e. Directional Antenna Relative Field Values:												Rotation (Degrees): <input checked="" type="checkbox"/> No Rotation												Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	0	0.937	10	0.85	20	0.752	30	0.679	40	0.653	50	0.667	60	0.69	70	0.701	80	0.69	90	0.667	100	0.653	110	0.679	120	0.752	130	0.85	140	0.937	150	0.989	160	0.999	170	0.98	180	0.95	190	0.924	200	0.912	210	0.914	220	0.928	230	0.944	240	0.958	250	0.963	260	0.958	270	0.945	280	0.928	290	0.914	300	0.912	310	0.924	320	0.95	330	0.98	340	0.999	350	0.989	Additional Azimuths		158	1	342	1						
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	<p>If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. Exhibit required. [Exhibit 46]</p>																																																																																																																								
11.	<p>Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if Certification Checklist Items 1(a), (b), or (c) are answered "No.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616? <input checked="" type="radio"/> Yes <input type="radio"/> No [Exhibit 47]</p> <p>If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.</p>																																																																																																																								
12.	<p>If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if Certification Checklist item 3 is answered "No.") [Exhibit 48]</p>																																																																																																																								
13.	<p>Environmental Protection Act. Submit in an Exhibit the following: [Exhibit 49]</p> <p>If Certification Checklist Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.</p> <p>By checking "Yes" to Certification Checklist Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.</p> <p>If Certification Checklist Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R Section 1.1311.</p>																																																																																																																								
<p>PREPARERS CERTIFICATION ON SECTION III MUST BE COMPLETED AND SIGNED.</p>																																																																																																																									

SECTION III - PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name JOSEPH M. DAVIS, P.E.	Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER	
Signature	Date 10/17/2011	
Mailing Address CHESAPEAKE RF CONSULTANTS, LLC 207 OLD DOMINION ROAD		
City YORKTOWN	State or Country (if foreign address) VA	Zip Code 23692 -
Telephone Number (include area code) 7036509600	E-Mail Address (if available) JOSEPH.DAVIS@RF-CONSULTANTS.COM	

Any specified rotation has already been applied to the plotted pattern.
 Field strength values shown on a rotated pattern may differ from the listed values
 because intermediate azimuths are interpolated between entered azimuths.

Close Window

