

## **ENGINEERING EXHIBIT**

### **Application for Digital Television Station Construction Permit**

prepared for

#### **Mountain Licenses, L.P.**

KFFX-TV Pendleton, OR

Facility ID 12729

Ch. 11 60 kW 471 m

*Mountain Licenses, L.P. ("MLLP")* is the licensee of television station KFFX-TV, Channel 11, Pendleton, OR. KFFX-TV is licensed to operate at 60 kW effective radiated power ("ERP") with a directional antenna having a height above average terrain ("HAAT") of 472 meters (BLCDT-20090616ABE). *MLLP* herein seeks a Construction Permit to indicate corrected geographic coordinates and ground elevation for the KFFX-TV transmitter site. No change in the transmitter's actual location or operation is proposed. A waiver is requested of the FCC's April 5, 2013 freeze on contour extensions.

As due diligence, it has been determined that the licensed KFFX-TV geographic coordinates and those of the associated Antenna Structure Registration ("ASR", number 1205225) did not match those corresponding to the actual tower location. The licensed and corrected coordinates for KFFX-TV are listed below.

	<u>N-Latitude</u>	<u>W-Longitude</u>	(NAD-27)
Licensed KFFX-TV	45° 44' 51"	118° 02' 11"	
Corrected KFFX-TV	45° 44' 52"	118° 02' 15"	

Thus, a coordinate correction of one second latitude and four seconds longitude is necessary. The correction falls outside of the three seconds described in §73.1690(b)(2) that can be specified in a license modification application. Thus, a Construction Permit must be obtained as the first step in correcting the KFFX-TV coordinates. Additionally, it has been determined that the ground elevation at the KFFX-TV site is 1670 meters AMSL, which is three meters lower than the 1673 meters AMSL as indicated in current KFFX-TV license data.

As specified herein, the KFFX-TV facility will continue to operate with the currently licensed 60 kW ERP, directional. The correction to the site location and ground elevation results in the antenna HAAT changing to 471 meters.

The KFFX-TV directional antenna is a horizontally polarized Andrew model ATW12V6-HSC-11. The directional antenna's azimuthal and elevation patterns are depicted in Figures 1, 2, and 2A.

A map is supplied as Figure 3 which depicts the standard predicted coverage contours. This map includes the location of Pendleton, KFFX-TV's principal community. As demonstrated thereon, the facility complies with §73.625(a)(1) as the entire principal community is encompassed by the 43 dBμ contour.

The KFFX-TV corrected facility's predicted service population provides a 106.5 percent match of the MB Docket 87-268 Seventh Report and Order Appendix B facility, as detailed in the following table.

<b>Digital Television Population Summary</b>		
Population Summary (2000 Census) OET Bulletin 69 method	Appendix B	Actual KFFX-TV (Corrected)
Within Noise Limited Contour	322,466	343,466
Not affected by terrain losses	316,815	337,242
Lost to all interference	128	77
Net DTV Service	<b>316,687</b>	<b>337,165</b>
Match of Appendix B	---	<b>106.47%</b>

### **Contour Extension – Waiver Request**

The FCC's Public Notice<sup>1</sup> of April 5, 2013 (DA 13-618) imposed limitations on the filing and processing of full power station applications that propose an increase in their authorized noise-limited service contour ("NLSC"). As specified herein, the proposed coordinate correction

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<sup>1</sup>"Media Bureau Announces Limitations on the Filing and Processing of Full Power and Class A Television Station Modification Applications, Effective Immediately, and Reminds Stations of Spectrum Act Preservation Mandate," DA 13-618, Public Notice, released April 5, 2013.

will place the KFFX-TV NLSC (41 dBμ) entirely within the currently authorized contour location except for a very small region.

DA 13-618 contemplates waiver of the contour extension limitation for certain cases by stating:

The Bureau will consider, on a case-by-case basis, requests for waiver of the filing limitation imposed by this Public Notice when a modification application is necessary or otherwise in the public interest for technical or other reasons to maintain quality service to the public, such as when zoning restrictions preclude tower construction at a particular site or when unforeseen events, such as extreme weather events or other extraordinary circumstances, require relocation to a new tower site.

For the case at hand, no change is proposed in the actual KFFX-TV operation, which was constructed at the digital transition and has been in use for almost five years. A coverage contour comparison is provided in Figure 4, which shows that the correction will result in a near match of the licensed NLSC with very slight NLSC extension over some azimuths. The area within the extension consists of 34.3 square kilometers which contains a population of 14 persons (2000 census). This is 0.08 percent of the total area (40,507.6 sq km) and 0.004 percent of the population (319,329 persons) within the corrected KFFX-TV NLSC.

Grant of the KFFX-TV coordinate correction would provide corrected license data to accurately represent the as-built KFFX-TV facility. A waiver of the DA 13-618 contour extension limitations is justified in this case for the reasons stated above.

## **Interference and Other Allocation Factors**

As with the licensed facility, the proposed coordinate correction involves expansion of the KFFX-TV service contour beyond that established by Appendix B values. A detailed interference study per OET Bulletin 69<sup>2</sup> 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. The interference study output report is provided as Table 1.

The nearest FCC monitoring station is 494 km distant at Ferndale, WA. This exceeds 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. The site is located 362 km from the U.S. – Canada border, within the international coordination zone. However, FCC International Bureau staff has informally advised that U.S. proposals beyond 300 km from the border are no longer referred to Canada.

## **Human Exposure to Radiofrequency Electromagnetic Field**

The KFFX-TV 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 25 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is  $4.7 \mu\text{W}/\text{cm}^2$ , which is 2.4 percent of the general population/uncontrolled maximum permitted 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.

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<sup>2</sup>FCC 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 2 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.

The general public is not exposed to RF levels attributable to KFFX-TV 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 continued use of a top-mounted transmitting antenna on an existing antenna support structure. No tower work or 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.  
February 28, 2014

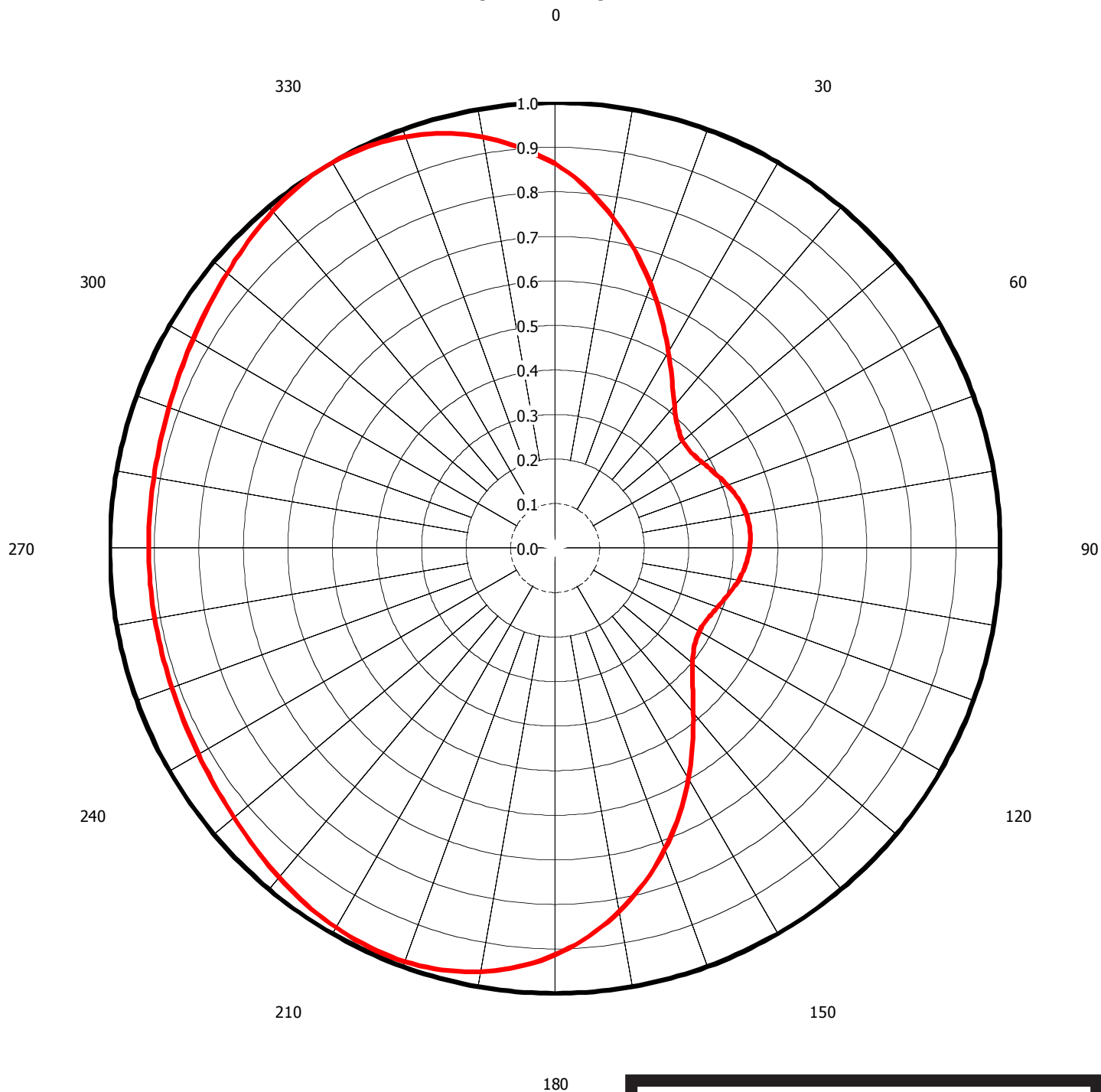
**Chesapeake RF Consultants, LLC**  
207 Old Dominion Road  
Yorktown, VA 23692  
703-650-9600

### List of Attachments

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

*This material was entered February 28, 2014 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.*

**Azimuth Pattern - Relative Field  
(True North)**



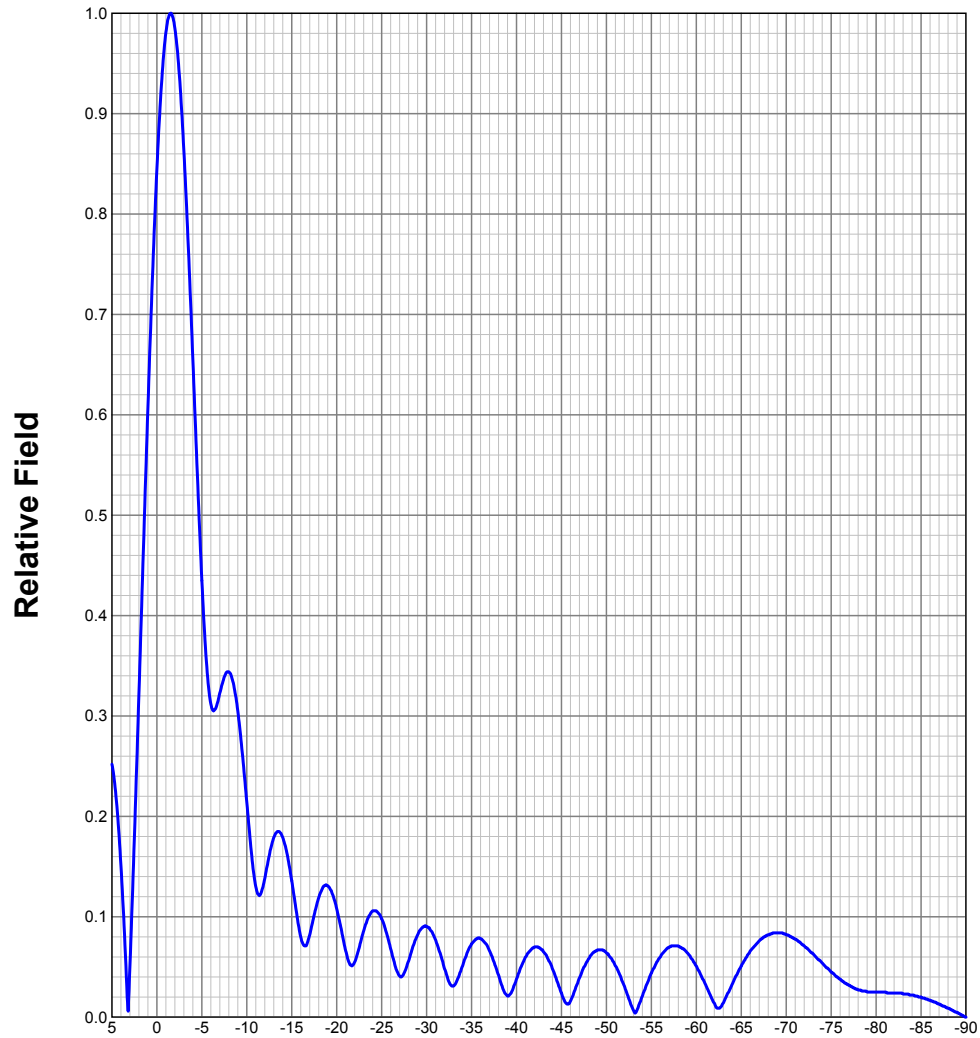
**Figure 1**  
**Antenna Azimuthal Pattern**  
**KFFX-TV Pendleton, OR**  
**Facility ID 12729**  
**Ch. 11 60 kW 471 m**

prepared for  
**Mountain Licenses, L.P.**

February, 2014

**ELEVATION PATTERN**

Type:	ATW12V6H		Channel:	11
Directivity:	Numeric	dBd	Location:	
Main Lobe:			Beam Tilt:	-1.50
Horizontal:			Polarization:	Horizontal



Preliminary, subject to final design and review.

ELECTRONICS RESEARCH, INC. **ERI**



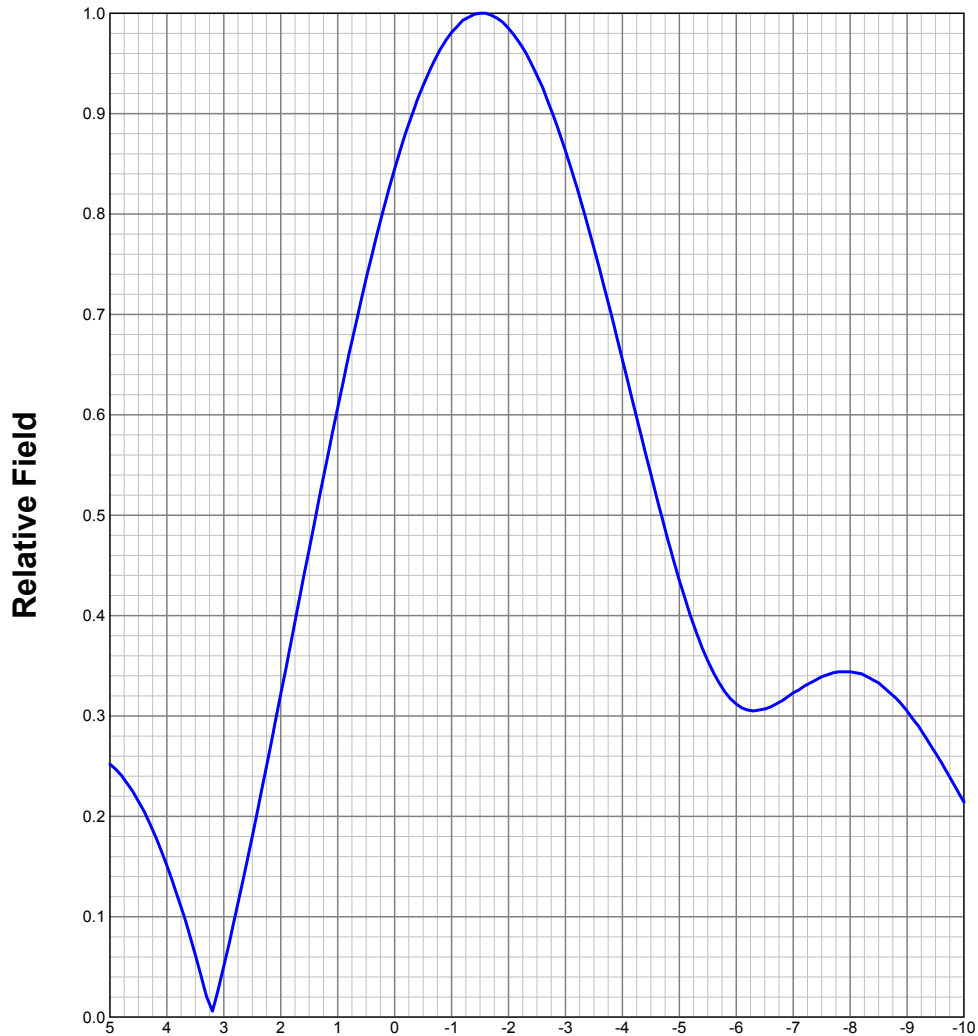
**Figure 2**  
**Antenna Elevation Pattern**  
**KFFX-TV Pendleton, OR**  
**Facility ID 12729**  
**Ch. 11 60 kW 471 m**

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February, 2014

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Horizontal:			Polarization:	Horizontal



Preliminary, subject to final design and review.

**ELECTRONICS RESEARCH, INC. ERI®**

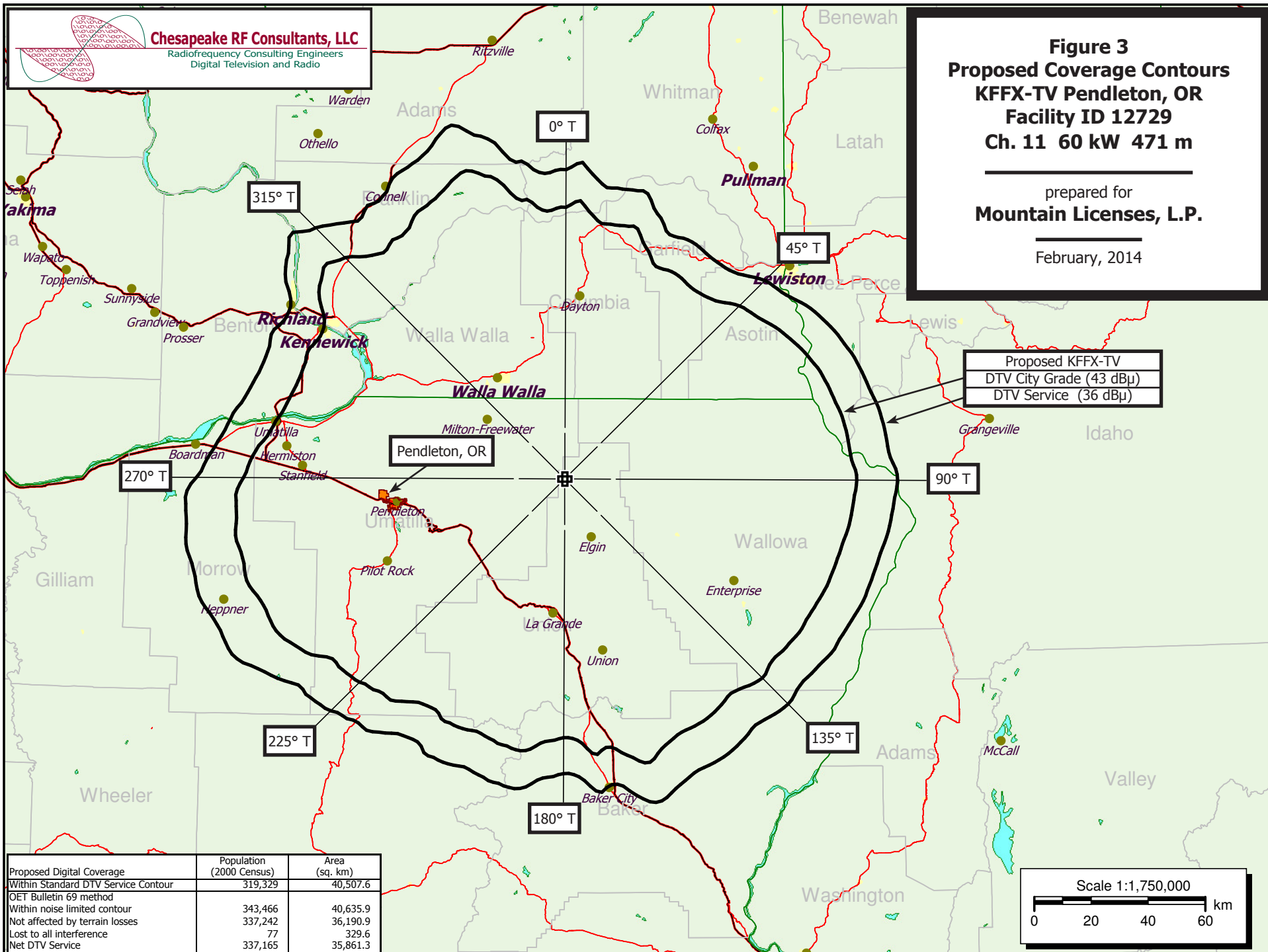


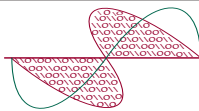
**Figure 2A - Detail  
Antenna Elevation Pattern  
KFFX-TV Pendleton, OR  
Facility ID 12729  
Ch. 11 60 kW 471 m**

prepared for  
**Mountain Licenses, L.P.**

February, 2014







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

**Figure 4**  
**Coverage Contour Comparison**  
**KFFX-TV Pendleton, OR**  
**Facility ID 12729**  
**Ch. 11 60 kW 471 m**

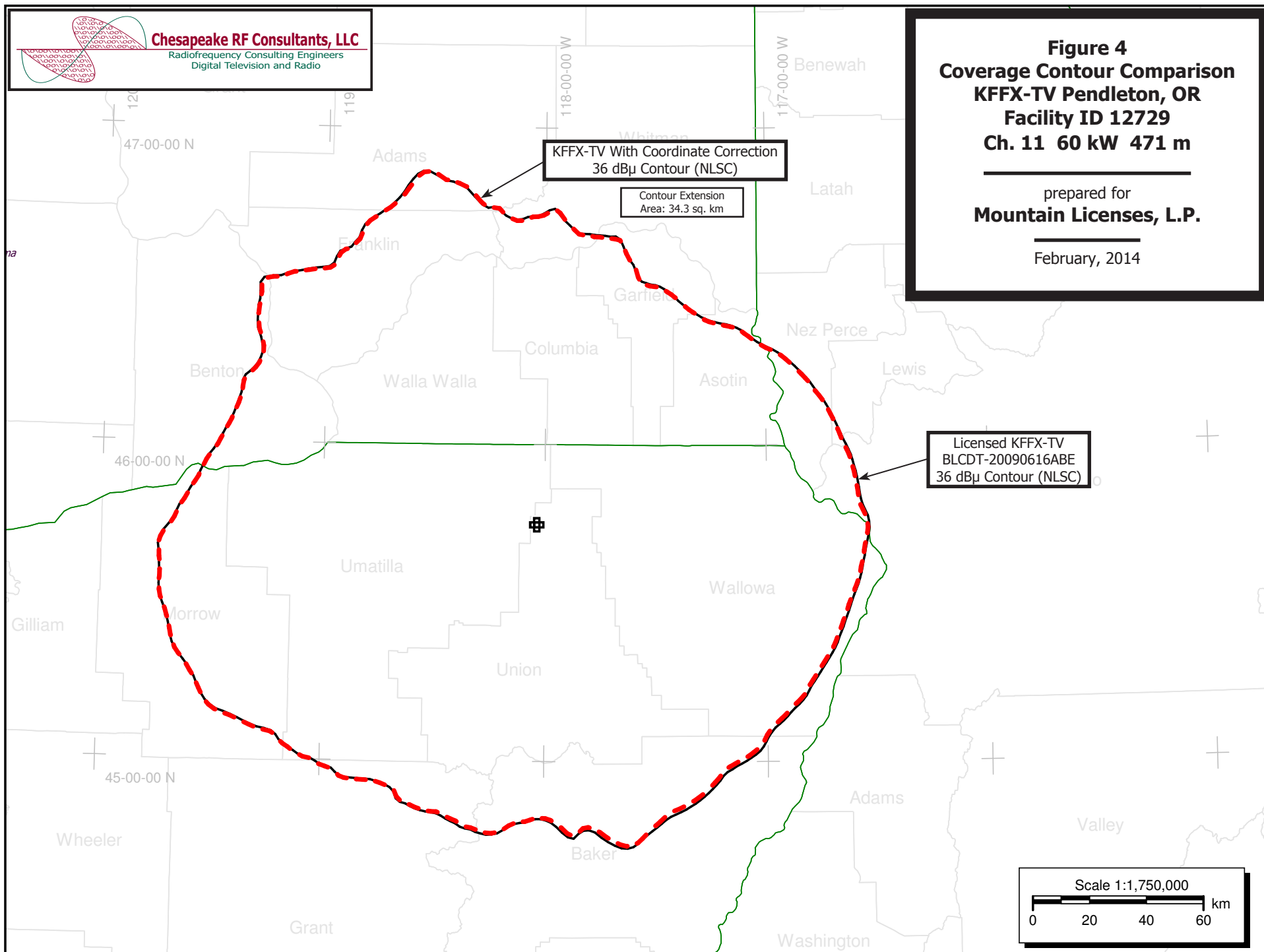
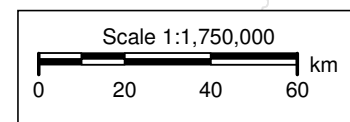
prepared for  
**Mountain Licenses, L.P.**

February, 2014

KFFX-TV With Coordinate Correction  
36 dBμ Contour (NLSC)

Contour Extension  
Area: 34.3 sq. km

Licensed KFFX-TV  
BLCDDT-20090616ABE  
36 dBμ Contour (NLSC)



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



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

TW Census data selected 2000  
Data Base Selected  
/space/software/cdbs/pt\_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 02-26-2014 Time: 16:19:28

Record Selected for Analysis

KFFX-TV USERRECORD-01 PENDLETON OR US  
Channel 11 ERP 60. kW HAAT 471. m RCMSL 01737 m  
Latitude 045-44-52 Longitude 0118-02-15  
Status APP Zone 2 Border Site number: 01  
Dir Antenna Make CDB Model 0000000087170 Beam tilt N Ref Azimuth 0.  
Last update Cutoff date Docket  
Comments  
Applicant

Cell Size for Service Analysis 2.0 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	36.0 dBu F(50,90)
(Deg)	(kW)	(m)	(km)
0.0	44.686	346.0	108.0
45.0	9.385	386.3	98.2
90.0	11.458	683.6	116.4
135.0	11.775	550.3	111.1
180.0	50.014	259.3	103.3
225.0	54.493	413.5	115.5
270.0	50.014	599.9	128.6
315.0	56.921	529.8	124.5

Evaluation toward Class A Stations from site # 01

No Spacing violations or contour overlap  
to Class A stations from site # 01

Class A Evaluation Complete

Checks to Site Number 01

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



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

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 = 361.5km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

\*\*\*\*\*  
Start of Interference Analysis

Channel	Call	City/State	ARN
11	KFFX-TV	PENDLETON OR	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
10	KWSU-TV	PULLMAN WA	140.5	LIC	BLEDT	20130307AAK
11	KUFM-TV	MISSOULA MT	333.5	LIC	BLEDT	20101008ACD
11	KOAB-TV	BEND OR	318.9	LIC	BLEDT	20060823AAP
11	KSTW	TACOMA WA	386.1	LIC	BLCDT	20091117AAX
12	KUID-TV	MOSCOW ID	132.3	LIC	BLEDT	20060804AFK

\*\*\*\*\*

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	KWSU-TV	PULLMAN WA	BLEDT	-20130307AAK

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
10	KNIN-TV	CALDWELL ID	355.4	LIC	BLCDT	-20111007AEB
11	KFFX-TV	PENDLETON OR	140.5	PLN	DTVPLN	-DTP0327
11	KFFX-TV	PENDLETON OR	140.5	APP	USERRECORD-01	

Total scenarios = 1

Result key: 1  
Scenario 1 Affected station 1  
Before Analysis

Results for: 10A WA PULLMAN BLEDT 20130307AAK LIC  
HAAT 408.0 m, ATV ERP 23.0 kW  
POPULATION 639856 AREA (sq km) 35222.3  
within Noise Limited Contour 431689 32006.0  
not affected by terrain losses 0 0.0  
lost to NTSC IX 0 0.0

**Table 1 KFFX-TV OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 3 of 6)



lost to additional IX by ATV	19	16.1
lost to ATV IX only	19	16.1
lost to all IX	19	16.1

Potential Interfering Stations Included in above Scenario 1

11A OR PENDLETON	DTVPLN	DTVP0327	PLN
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After Analysis

Results for: 10A WA PULLMAN	BLEDT	20130307AAK	LIC
HAAT 408.0 m, ATV ERP 23.0 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	639856	35222.3	
not affected by terrain losses	431689	32006.0	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	34	68.4	
lost to ATV IX only	34	68.4	
lost to all IX	34	68.4	

Potential Interfering Stations Included in above Scenario 1

11A OR PENDLETON	USERRECORD01	APP
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Percent new IX = 0.0035%

Worst case new IX 0.0035% Scenario 1

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#### Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
11	KUFM-TV	MISSOULA MT	BLEDT -20101008ACD

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
11	KFFX-TV	PENDLETON OR	333.5	PLN	DTVPLN -DTVP0327
12	KUID-TV	MOSCOW ID	228.7	LIC	BLEDT -20060804AFK
12	KTVH-DT	HELENA MT	172.2	LIC	BLCDT -20100920ABN
11	KFFX-TV	PENDLETON OR	333.5	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.
11	KOAB-TV	BEND OR	BLEDT -20060823AAP

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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**Table 1 KFFX-TV OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 4 of 6)



10	KOPB-TV	PORTLAND OR	195.4	LIC	BLEDT	-20120727AAA
11	KCBY-TV	COOS BAY OR	237.3	LIC	BLCDT	-20090612AGE
11	KFFX-TV	PENDLETON OR	318.9	PLN	DTVPLN	-DTVP0327
11	KSTW	TACOMA WA	400.4	LIC	BLCDT	-20091117AAX
12	KDRV	MEDFORD OR	217.3	LIC	BLCDT	-20090303ACL
12	KPTV	PORTLAND OR	195.5	LIC	BLCDT	-20090612ADH
11	KFFX-TV	PENDLETON OR	318.9	APP	USERRECORD-01	

Total scenarios = 1

Result key: 2  
Scenario 1 Affected station 3  
Before Analysis

Results for: 11A OR BEND	BLEDT	20060823AAP	LIC
HAAT 245.0 m, ATV ERP 90.0 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	159860	34673.7	
not affected by terrain losses	157295	27188.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	19	184.0	
lost to ATV IX only	19	184.0	
lost to all IX	19	184.0	

Potential Interfering Stations Included in above Scenario 1

11A OR PENDLETON	DTVPLN	DTVP0327	PLN
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After Analysis

Results for: 11A OR BEND	BLEDT	20060823AAP	LIC
HAAT 245.0 m, ATV ERP 90.0 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	159860	34673.7	
not affected by terrain losses	157295	27188.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	22	336.1	
lost to ATV IX only	22	336.1	
lost to all IX	22	336.1	

Potential Interfering Stations Included in above Scenario 1

11A OR PENDLETON	USERRECORD01	APP
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Percent new IX = 0.0019%

Worst case new IX 0.0019% Scenario 1

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#### Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application Ref. No.
11	KSTW	TACOMA WA	BLCDT -20091117AAX

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



Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
11	KOAB-TV	BEND OR	400.4	LIC	BLEDT -20060823AAP
11	KFFX-TV	PENDLETON OR	386.2	PLN	DTVPLN -DTVPO327
11	KFFX-TV	PENDLETON OR	386.1	APP	USERRECORD-01

Proposal causes no interference

#####

Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
12	KUID-TV	MOSCOW ID	BLEDT -20060804AFK

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
11	KUFM-TV	MISSOULA MT	228.7	LIC	BLEDT -20101008ACD
11	KFFX-TV	PENDLETON OR	132.3	PLN	DTVPLN -DTVPO327
12	KTVH-DT	HELENA MT	400.9	LIC	BLEDT -20100920ABN
13	KECI-TV	MISSOULA MT	227.9	LIC	BLEDT -20100701BOM
13	KTVR	LA GRANDE OR	163.5	LIC	BLEDT -20090619AAD
13	KXLY-TV	SPOKANE WA	138.2	LIC	BLEDT -19991104ABD
13	KXLY-TV	SPOKANE WA	138.2	APP	BMPCDT -20100819ABL
11	KFFX-TV	PENDLETON OR	132.3	APP	USERRECORD-01

Total scenarios = 2

Result key: 4

Scenario 2 Affected station 5  
Before Analysis

Results for: 12A ID MOSCOW BLEDT 20060804AFK LIC

HAAT	340.0 m, ATV ERP	78.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour			397127	39784.0
not affected by terrain losses			272806	35725.3
lost to NTSC IX			0	0.0
lost to additional IX by ATV			48607	771.0
lost to ATV IX only			48607	771.0
lost to all IX			48607	771.0

Potential Interfering Stations Included in above Scenario 2

13A WA SPOKANE	BMPCDT	20100819ABL	APP
11A OR PENDLETON	DTVPLN	DTVPO327	PLN

After Analysis

Results for: 12A ID MOSCOW BLEDT 20060804AFK LIC

HAAT	340.0 m, ATV ERP	78.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour			397127	39784.0
not affected by terrain losses			272806	35725.3

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



lost to NTSC IX	0	0.0
lost to additional IX by ATV	48632	830.9
lost to ATV IX only	48632	830.9
lost to all IX	48632	830.9

Potential Interfering Stations Included in above Scenario 2

13A WA SPOKANE	BMPCDT	20100819ABL	APP
11A OR PENDLETON	USERRECORD01		APP

Percent new IX = 0.0112%

Worst case new IX 0.0112% Scenario 2

#####

Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application Ref. No.
11	KFFX-TV	PENDLETON OR	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
10	KWSU-TV	PULLMAN WA	140.5	LIC	BLEDT -20130307AAK
11	KUFM-TV	MISSOULA MT	333.5	LIC	BLEDT -20101008ACD
11	KOAB-TV	BEND OR	318.9	LIC	BLEDT -20060823AAP
11	KSTW	TACOMA WA	386.1	LIC	BLEDT -20091117AAX
12	KUID-TV	MOSCOW ID	132.3	LIC	BLEDT -20060804AFK

Total scenarios = 1

Result key: 5

Scenario 1 Affected station 6  
Before Analysis

Results for: 11A OR PENDLETON USERRECORD01 APP

HAAT	471.0 m, ATV ERP	60.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour			343466	40635.9
not affected by terrain losses			337242	36190.9
lost to NTSC IX			0	0.0
lost to additional IX by ATV			77	329.6
lost to ATV IX only			77	329.6
lost to all IX			77	329.6

Potential Interfering Stations Included in above Scenario 1

10A WA PULLMAN	BLEDT	20130307AAK	LIC
11A OR BEND	BLEDT	20060823AAP	LIC
12A ID MOSCOW	BLEDT	20060804AFK	LIC

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

<b>SECTION III-D - DTV Engineering</b>	
<b>Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.</b>	
<p><b>Pre-Transition Certification Checklist:</b> 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><b>Post-Transition Expedited Processing.</b> 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 <b>submit the Exhibit</b> 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

<b>SECTION III-D - DTV Engineering</b>	
<b>TECHNICAL SPECIFICATIONS</b>	
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.	
<b>TECH BOX</b>	
1.	Channel Number: DTV 11 Analog TV, if any
2.	Zone: <input type="radio"/> I <input checked="" type="radio"/> II <input type="radio"/> III
3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 45 Minutes 44 Seconds 52 <input checked="" type="radio"/> North <input type="radio"/> South  Longitude: Degrees 118 Minutes 2 Seconds 15 <input checked="" type="radio"/> West <input type="radio"/> East
4.	Antenna Structure Registration Number: 1205225 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA
5.	Antenna Location Site Elevation Above Mean Sea Level: 1670 meters
6.	Overall Tower Height Above Ground Level: 77.8 meters
7.	Height of Radiation Center Above Ground Level: 67 meters

8.	Height of Radiation Center Above Average Terrain :	471 meters																																																																																																
9.	Maximum Effective Radiated Power (average power):	60 kW																																																																																																
10.	<div>Antenna Specifications:</div> <div>a. Manufacturer AND Model ATW-12V6-HSC-11</div> <div>b. Electrical Beam Tilt: 1.5 degrees <input type="checkbox"/> Not Applicable</div> <div>c. Mechanical Beam Tilt: degrees toward azimuth degrees True <input checked="" type="checkbox"/> Not Applicable</div> <div style="text-align: right;">[Exhibit 46]</div> <div>Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c).</div> <div>d. Polarization: <input checked="" type="radio"/> Horizontal <input type="radio"/> Circular <input type="radio"/> Elliptical</div> <div>e. Directional Antenna Relative Field Values: <input type="checkbox"/> Not applicable (Nondirectional)</div> <div>[For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.]</div> <div>[Relative Field Values]</div> <div style="text-align: center; padding: 10px;"><b>10c. Directional Antenna Relative Field Values</b> [Fill in this subform for a composite directional (not off-the-shelf) antenna, only.]</div> <div style="border: 1px solid black; padding: 5px;"><div>e. Directional Antenna Relative Field Values:</div><div>Rotation (Degrees): <input checked="" type="checkbox"/> No Rotation</div><table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"><thead><tr><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th></tr></thead><tbody><tr><td>0</td><td>0.863</td><td>10</td><td>0.753</td><td>20</td><td>0.629</td><td>30</td><td>0.509</td><td>40</td><td>0.417</td><td>50</td><td>0.374</td></tr><tr><td>60</td><td>0.383</td><td>70</td><td>0.412</td><td>80</td><td>0.436</td><td>90</td><td>0.437</td><td>100</td><td>0.418</td><td>110</td><td>0.388</td></tr><tr><td>120</td><td>0.374</td><td>130</td><td>0.403</td><td>140</td><td>0.483</td><td>150</td><td>0.599</td><td>160</td><td>0.72</td><td>170</td><td>0.829</td></tr><tr><td>180</td><td>0.913</td><td>190</td><td>0.966</td><td>200</td><td>0.988</td><td>210</td><td>0.984</td><td>220</td><td>0.965</td><td>230</td><td>0.941</td></tr><tr><td>240</td><td>0.925</td><td>250</td><td>0.916</td><td>260</td><td>0.913</td><td>270</td><td>0.913</td><td>280</td><td>0.915</td><td>290</td><td>0.923</td></tr><tr><td>300</td><td>0.939</td><td>310</td><td>0.961</td><td>320</td><td>0.987</td><td>330</td><td>1</td><td>340</td><td>0.983</td><td>350</td><td>0.937</td></tr><tr><td colspan="2">Additional Azimuths</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table><div style="text-align: center; color: blue; margin-top: 5px;"><a href="#">Relative Field Polar Plot</a></div></div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"><div>If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. <b>Exhibit required.</b></div><div style="text-align: right;">[Exhibit 47]</div></div>		Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	0	0.863	10	0.753	20	0.629	30	0.509	40	0.417	50	0.374	60	0.383	70	0.412	80	0.436	90	0.437	100	0.418	110	0.388	120	0.374	130	0.403	140	0.483	150	0.599	160	0.72	170	0.829	180	0.913	190	0.966	200	0.988	210	0.984	220	0.965	230	0.941	240	0.925	250	0.916	260	0.913	270	0.913	280	0.915	290	0.923	300	0.939	310	0.961	320	0.987	330	1	340	0.983	350	0.937	Additional Azimuths											
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11.	Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if <b>Certification Checklist</b> 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?  If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.	<div><input checked="" type="radio"/> Yes <input type="radio"/> No</div> <div>[Exhibit 48]</div>																																																																																																
12.	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 <b>Certification Checklist</b> item 3 is answered "No.")	[Exhibit 49]																																																																																																
13.	<div><b>Environmental Protection Act. Submit in an Exhibit</b> the following:</div> <div>If <b>Certification Checklist</b> 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.</div> <div>By checking "Yes" to <b>Certification Checklist</b> 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.</div> <div>If <b>Certification Checklist</b> Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R Section 1.1311.</div>																																																																																																	
<b>PREPARERS CERTIFICATION ON SECTION III MUST BE COMPLETED AND SIGNED.</b>																																																																																																		

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**SECTION III - PREPARER'S CERTIFICATION**

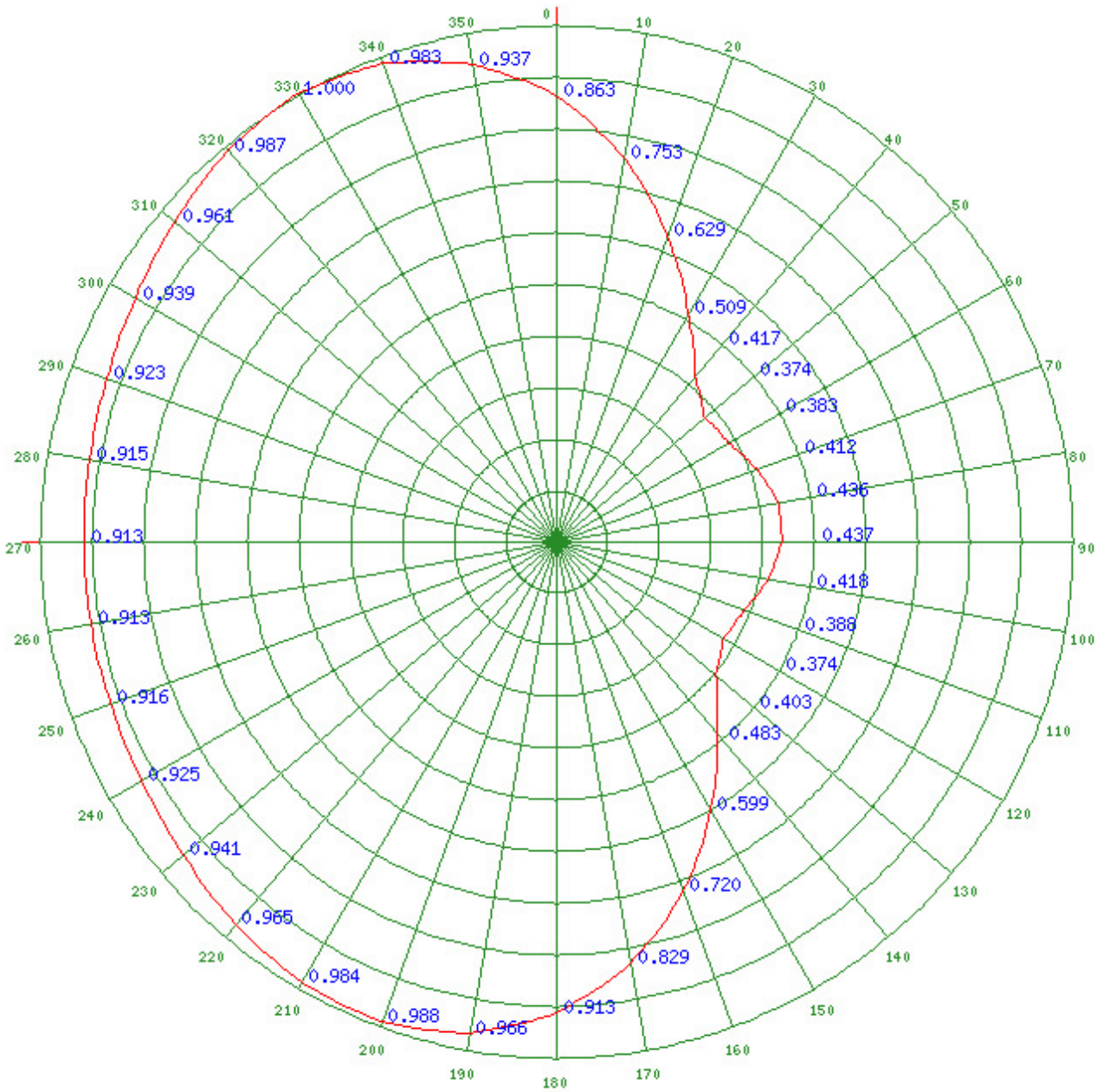
I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name JOSEPH M. DAVIS, P.E.	Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER	
Signature	Date 2/28/2014	
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.

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