

ENGINEERING EXHIBIT

Application for Construction Permit

prepared for

Mountain Licenses, L.P.

KBWU-LP Richland, Etc., WA

Facility ID 58685

Ch. 36 (Digital) 13.3 kW

Mountain Licenses, L.P. (“MLLP”) is the licensee of digital Low Power Television station KBWU-LP, Channel 36, Richland, Etc., WA, Facility ID 58685 (BLDTL-20071002ACD). KBWU-LP is licensed to operate with an effective radiated power (“ERP”) of 6.5 kW using an ERI model AL8 directional antenna.

MLLP herein proposes a minor modification of KBWU-LP to employ a different directional antenna. No change to the KBWU-LP transmitter site or antenna elevation is proposed. The proposed antenna is a Scala model 4DR-4S, an “off the shelf” directional antenna. The standard pattern for this model is described in the FCC’s CDBS as Antenna ID number 20735. Antenna pattern rotation of 340 degrees is proposed. The maximum ERP will be increased to 13.3 kW, since the proposed antenna has more gain than the licensed antenna and the existing transmitter will continue to be employed.

The proposed facility will operate on Channel 36 using a “stringent” out of channel emission mask. **Figure 1** depicts the 51 dB μ coverage contours of the licensed and proposed facilities. The use of the same transmitter site and the service area overlap shown demonstrates compliance with §73.3572 for a minor change.

The replacement antenna system for KBWU-LP will be installed on the existing KBWU-LP antenna support structure with no increase in overall structure height. The overall structure elevation passes the FCC’s TOWAIR program for the transmitter location, thus FAA notification and commensurate FCC antenna structure registration are not necessary.

A detailed interference study per OET Bulletin 69¹ shows that the proposal complies with the Commission's interference protection requirements toward all NTSC, DTV, television translator, LPTV, and Class A stations. The results, summarized in **Table 1**, show that any new interference does not exceed the Commission's interference limits (0.5 percent to full power and Class A stations, and 2.0 percent to secondary stations).

Based on the Canadian allotments and procedures stated in the *Letter of Understanding*² ("*LOU*") regarding full power digital television stations along the U.S. - Canadian Border, no Canadian facility would be impacted by the proposed KBWU-LP facility on Canadian land area. The KBWU-LP transmitter site is located 322 km from the U.S. - Canadian Border. A study using pertinent TV propagation curves (per "Step 2" of the *LOU*) is provided in **Figure 2** which shows that the worst case 12.4 dB μ F(50,10) co-channel interfering contour for the proposed KBWU-LP does not reach the U.S. - Canada Border. Based on this analysis, the instant proposal complies with the U.S. - Canadian *LOU* for coordination of full power digital television stations.

The nearest FCC monitoring station is at Ferndale, WA, at a distance of 408.6 km from the proposed site. 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 AM stations within 3.2 kilometers of the site, based on information contained within the Commission's database. The site location is beyond the border areas requiring international coordination.

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.

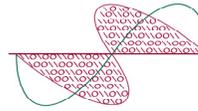
² *Letter of Understanding Between the Federal Communications Commission of the United States of America and Industry Canada Related to the Use of the 54-72 MHz, 76-88 MHz, 174-216 MHz, and 470-806 MHz Bands for the Digital Television Broadcasting Service Along the Common Border*, September 2000.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The proposed transmitting antenna will be installed on an existing antenna support structure. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

The transmitting location is on Jump Off Joe Butte overlooking Richland. There are numerous other transmitting facilities at this site area situated on various antenna supporting structures, each within a fenced compound with RF exposure warning signs. *MLLP* participates in a radiofrequency ("RF") electromagnetic field exposure safety program, along with other broadcasters and FCC licensees that utilize the Jump Off Joe Butte site area. Following construction of the proposed facility, *MLLP* will conduct RF exposure measurements (and/or detailed calculations) to evaluate the level of RF exposure resulting from the digital KBWU-LP facility. As necessary, based on these results and considering all emitters, appropriate exposure abatement procedures will be established and followed, in order to comply with the Commission's exposure limits. Such abatement procedures may involve the restriction of access to certain areas and/or facility modifications to reduce RF levels.

Considering the post-construction measurement and an appropriate abatement program, the general public and workers will not be exposed to RF levels attributable to the proposal in excess of the Commission's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, authorized personnel will be trained and/or supervised as necessary for access to any "controlled" areas. *MLLP* 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.



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.
March 17, 2008

Chesapeake RF Consultants, LLC
11993 Kahns Road
Manassas, VA 20112
703-650-9600

List of Attachments

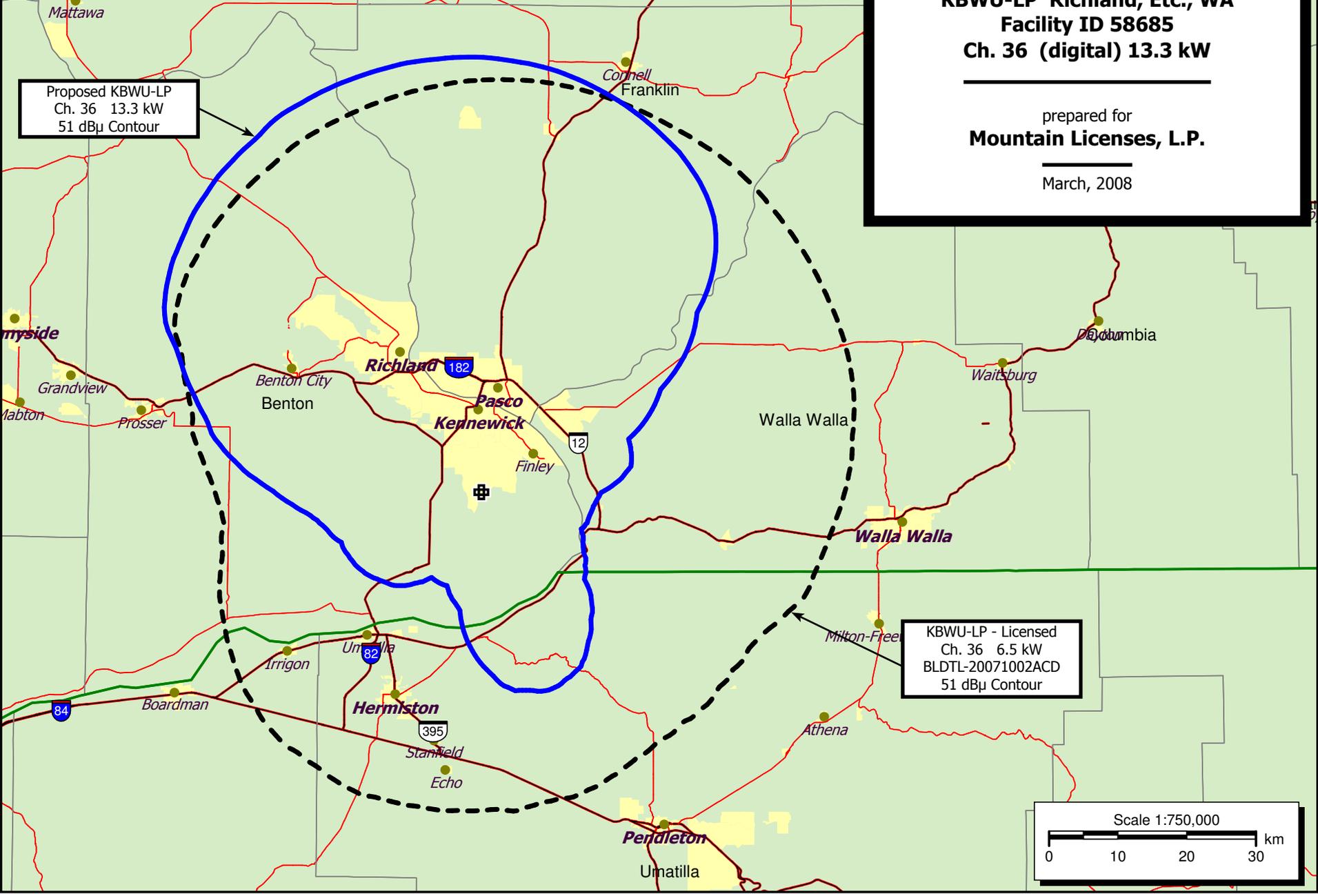
Figure 1	Coverage Contour Comparison
Figure 2	KBWU-LP Interfering Contour Towards Canada
Table 1	Interference Analysis Results Summary
Form 346	Saved Version of Engineering Sections from FCC Form at Time of Upload

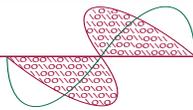
This material was entered March 17, 2008 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's name and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.

Figure 1
Coverage Contour Comparison
KBWU-LP Richland, Etc., WA
Facility ID 58685
Ch. 36 (digital) 13.3 kW

prepared for
Mountain Licenses, L.P.

March, 2008





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

Figure 2
Interfering Contour Towards Canada
KBWU-LP Richland, Etc., WA
Facility ID 58685
Ch. 36 (digital) 13.3 kW

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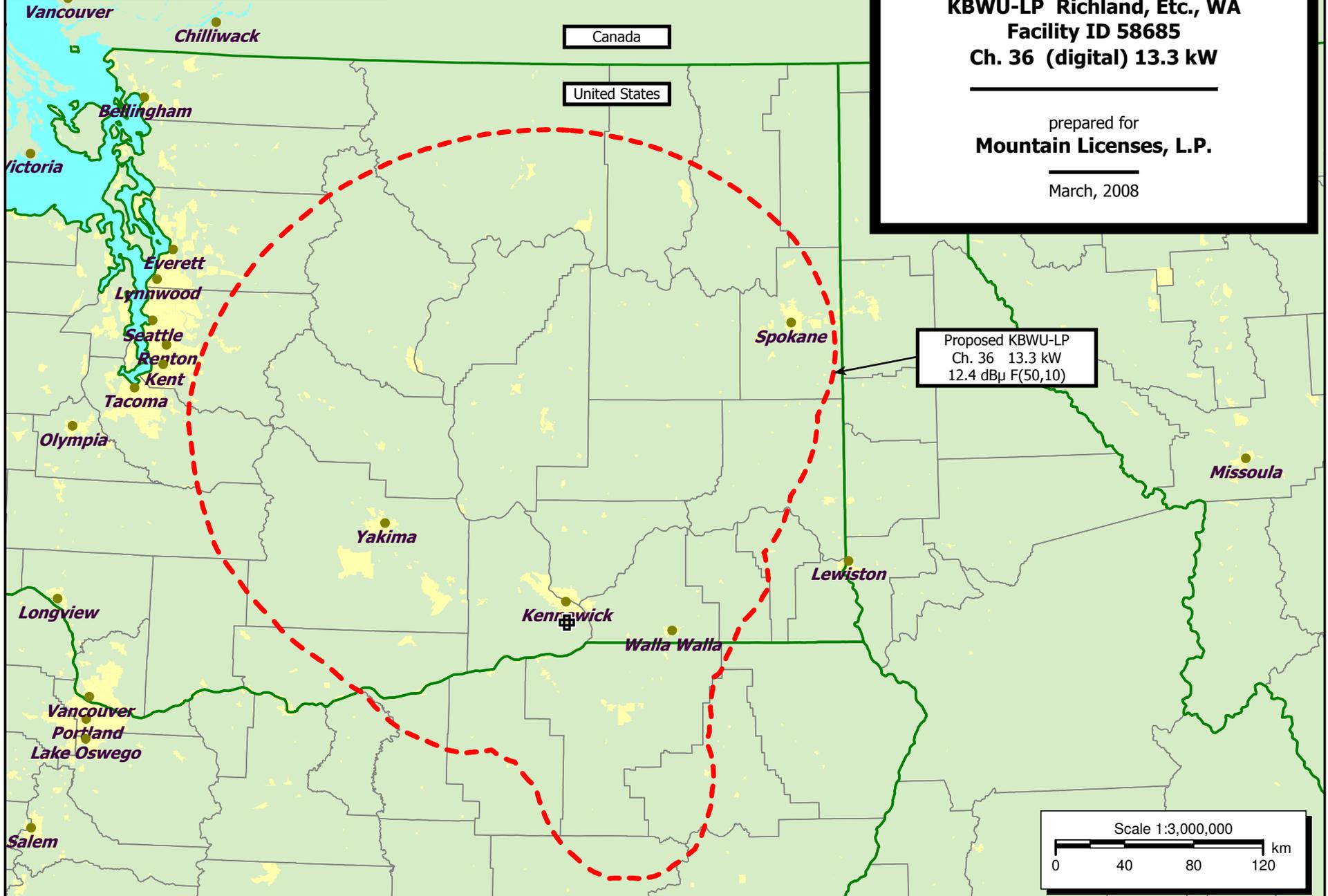


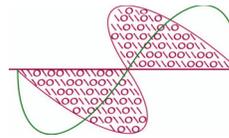
Table 1

Interference Analysis Results Summary

prepared for

Mountain Licenses, L.P.

KWBU-LP Richland, Etc., WA



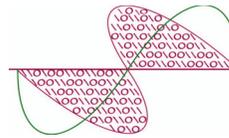
Chesapeake RF Consultants, LLC

Radiofrequency Consulting Engineers
Digital Television and Radio

Ch.	Call	City/State	Dist (km)	Status	Application Ref. No.	---Population (1990 Census)---	
						Baseline	New Interference
21	K21EK	WALLA WALLA WA	74.8	LIC	BLTTL-20071108AEM	---	none
22	K59BO	PENDLETON OR	71.4	CP	BDISTT-20060315AET	---	none
22	K22BI	WALLA WALLA WA	74.8	LIC	BLTTL-19900813IG	---	none
28	K28GD	HEPPNER, ETC. OR	99.9	LIC	BLTT-20020419ABE	---	none
28	K28FT	WALLA WALLA WA	57.7	LIC	BLTTL-19991018AAC	---	none
29	K29EL	LA GRANDE OR	139.8	LIC	BLTT-20011212AAF	---	none
29	K29EG	MILTON, ETC. OR	71.5	LIC	BLTT-20030107ABA	---	none
29	K29FF	KENNEWICK, ETC. WA	0.0	LIC	BLTTL-20040616AAO	---	none
29	KIMA-TV	YAKIMA WA	116.1	LIC	BLCT-2586	---	none
32	K32DE	PENDLETON, ETC. OR	99.9	LIC	BLTT-19950127JH	---	none
33	K33FS	ELGIN OR	139.8	LIC	BLTT-20011212AAB	---	none
33	K33CJ	WASCO/HEPPNER OR	115.8	LIC	BLTTL-19980903JE	---	none
33	K33EJ	WALLA WALLA WA	75.3	LIC	BLTTL-19980428JG	---	none
34	K34DI	LA GRANDE OR	99.9	LIC	BLTT-19920304II	---	none
35	K35BW	LEWISTON ID	164.7	LIC	BLTT-19890203IC	---	none
35	KUID-TV	MOSCOW ID	186.8	LIC	BPRM-20020805ABD	---	none
35	KUID-TV	MOSCOW ID	177.6	APP	BPET-20041019ABU	---	none
35	K35GA	LA GRANDE OR	139.8	LIC	BLTT-20011212AAE	---	none
35	K35FO	MILTON-FREEWATER OR	71.5	LIC	BLTT-20020724AAD	---	none
35	KAPP	YAKIMA WA	116.2	LIC	BLCT-2022	221,031	0 (0.00%)
36	KTMF	MISSOULA MT	404.0	LIC	BLCDDT-20060921ABA	---	none
36	K36BW	THOMPSON FALLS MT	331.0	APP	BSTA-20060308ALU	---	none
36	K36BW	THOMPSON FALLS MT	328.7	LIC	BLTTL-19910729IA	---	none
36	K36BW	THOMPSON FALLS MT	330.9	CP	BDFCDTL-20070806ABU	---	none
36	K36BA	BURNS OR	281.2	LIC	BLTT-19880222IE	---	none
36	NEW	CHEMULT OR	313.0	APP	BDCCDTT-20061030ABI	---	none
36	KXOR-LP	EUGENE OR	390.3	LIC	BLTTL-20020806AAT	---	none
36	K36FG	HOOD RIVER, ETC. OR	193.5	LIC	BLTT-20020311AAM	---	none
36	K36FG	HOOD RIVER, ETC. OR	193.5	CP	BPTT-20070911ACB	---	none
36	K36DP	PENDLETON, ETC. OR	99.9	LIC	BLTT-19950512IH	---	none
36	K66AZ	PRINEVILLE OR	233.8	CP	BDISTTL-20060329AGX	---	none
36	K36GU	ROCKAWAY & VICINITY OR	374.0	LIC	BLTT-20030610AAE	---	none
36	KORS-CA	SALEM OR	336.4	LIC	BLTTA-20020722ABK	---	none
36	K67BF	WALLOWA OR	156.2	CP	BPTT-20050527AWK	---	none
36	K36EW	COLLEGE PARK WA	58.4	LIC	BLTTL-19991018AAB	---	none

Table 1
Interference Analysis Results Summary

(page 2 of 2)



Chesapeake RF Consultants, LLC

Radiofrequency Consulting Engineers
 Digital Television and Radio

Ch.	Call	City/State	Dist (km)	Status	Application Ref. No.	---Population (1990 Census)---	
						Baseline	New Interference
36	K36DG	LONGVIEW WA	286.9	CP	BDFCDTT-20060328AJU	---	none
36	K36DG	LONGVIEW WA	286.8	LIC	BLTT-19931202IF	---	none
36	KSKN	SPOKANE WA	216.4	CP MOD	BMPCDT-20031110AMP	435,894	16 (0.00%)
36	KSKN	SPOKANE WA	216.4	LIC	BLCDDT-20050113ACT	435,894	16 (0.00%)
36	KSTW	TACOMA WA	294.1	LIC	BLCDDT-20050509ABV	---	none
36	KCWK-LD	YAKIMA WA	116.2	CP	BDCCDTT-20061030ATA	185,676	0 (0.00%)
37	NEW	LEWISTON ID	164.7	APP	BSFDDT-20060630COI	---	none
38	K38AH	PENDLETON, ETC. OR	99.9	LIC	BLTT-19950612II	---	none
39	K39FD	ELGIN OR	139.8	LIC	BLTT-20011212AAC	---	none
39	K39ES	HEPPNER, ETC. OR	115.8	LIC	BLTT-19980803JH	---	none
39	K39DM	ELLENSBURG WA	133.2	LIC	BLTTL-19930628IE	---	none
39	K39DM	ELLENSBURG WA	133.2	CP	BPTTL-20060127ARI	---	none
39	K39DL	MOSES LAKE WA	84.7	LIC	BLTTL-19980107JB	---	none
39	K39FU	YAKIMA WA	115.1	LIC	BLTTL-20040616AAS	---	none
40	K40FM	MILTON-FREEWATER OR	71.5	LIC	BLTT-20030108AAW	---	none
43	K43FH	HEPPNER, ETC. OR	115.8	LIC	BLTT-19980803JJ	---	none
43	KUMN-LP	MOSES LAKE, ETC. WA	84.6	LIC	BLTT-20060428ACH	---	none
43	K43GY	YAKIMA, ETC. WA	115.1	LIC	BLTTL-20040615ACA	---	none

SECTION III - ENGINEERING DATA (Digital)

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:
36

2. Translator Input Channel No. :

3. Primary station proposed to be rebroadcast:

Facility Identifier	Call Sign	City	State	Channel
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4. Antenna Location Coordinates: (NAD 27)
 Latitude:
 Degrees 46 Minutes 6 Seconds 15 North South
 Longitude:
 Degrees 119 Minutes 7 Seconds 48 West East

5. Antenna Structure Registration Number:
 Not Applicable [Exhibit 10] Notification filed with FAA

6. Antenna Location Site Elevation Above Mean Sea Level: 664.4 meters

7. Overall Tower Height Above Ground Level: 14.9 meters

8. Height of Radiation Center Above Ground Level: 12 meters

9. Maximum Effective Radiated Power (ERP): 13.3 kW

10. Transmitter Output Power: 0.5 kW

11. a. Transmitting Antenna:
 Before selecting Directional "Off-the-Shelf", refer to "Search for Antenna Information" under [CDBS Public Access](http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/cdbs_pa.htm) (http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/cdbs_pa.htm). Make sure that the Standard Pattern is marked Yes and that the relative field values shown match your values. Enter the Manufacturer (Make) and Model exactly as displayed in the Antenna Search.
 Nondirectional Directional "Off-the-shelf" Directional composite
 Manufacturer SCA Model 4DR-16S

b. Electrical Beam Tilt: degrees Not Applicable

c. Directional Antenna Relative Field Values: N/A (Nondirectional or Directional "Off-the-shelf")
 No Rotation
 Rotation (Degrees): 340

Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
0		10		20		30		40		50	
60		70		80		90		100		110	
120		130		140		150		160		170	
180		190		200		210		220		230	
240		250		260		270		280		290	
300		310		320		330		340		350	
Additional Azimuths											

Relative Field Polar Plot

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

12. Out-of-channel Emission Mask: Simple Stringent

CERTIFICATION

13. **Interference** : The proposed facility complies with all of the following applicable rule sections. 47.C.F.R Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030. Yes No
 See Explanation in [Exhibit 11]

14. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance, an **Exhibit is required.** Yes No
 See Explanation in [Exhibit 12]

By checking "Yes" above, 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.

15. **Channels 52-59.** If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:

The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.

Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licenses of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.

16. **Channels 60-69.** If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable:

Pursuant to Section 74.786(e), the applicant has notified, within 30 days of filing this application, all commercial wireless licenses of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.

Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreements(s) with 700 MHz public safety regional planning committee(s) and state administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location.

Pursuant to Section 74.786(e), the applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator(s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.

PREPARERS CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.

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 3/17/2008	
Mailing Address CHESAPEAKE RF CONSULTANTS, LLC 11993 KAHNS ROAD			
City MANASSAS		State or Country (if foreign address) VA	Zip Code 20112 -
Telephone Number (include area code) 7036509600		E-Mail Address (if available) JOSEPH.DAVIS@RF-CONSULTANTS.COM	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

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.

