

ENGINEERING STATEMENT  
IN SUPPORT OF AMENDMENT OF APPLICATION  
BMPCDT-20080620AGP  
FOR THE PROPOSED DIGITAL TV OPERATION OF  
KVOS-DT, BELLINGHAM, WASHINGTON  
CHANNEL 35 1000 KW 478 METERS  
JULY 2008

This engineering statement has been prepared on behalf of Newport Television LLC, licensee of TV station KVOS-TV, Bellingham, Washington, in support of amendment of its application (BMPCDT-20080620AGP) to modify the construction permit (BPCDT-20060106AAF) for post-transition digital TV (DTV) operation on Channel 35.

At present KVOS-TV, Facility ID Number 35862, operates its analog TV facilities on Channel 12 (204-210 MHz) with 234 kW effective radiated power (ERP) and 722 meters antenna height above average terrain (HAAT) using a non-directional TV antenna. KVOS-TV also holds a construction permit (CP) to operate its digital TV facility on Channel 35 (596-602 MHz) with 580 kW ERP, 799 meters HAAT and a directional TV antenna. The Commission has allotted Channel 35 with 612 kW ERP and 722 meters HAAT. KVOS-TV has filed an application (BMPCDT-20080620AGP) to modify its CP to operate with 560 kW ERP and 752 meters HAAT from a different antenna site. The instant amendment to the application proposes a new antenna site for the Channel 35 DTV operation. It is proposed to operate KVOS-DT from the new site with 1000 kW ERP and 478 meters HAAT. The noise limited contour (41 dBu), based on the Appendix B facilities, extends on the average of 121.7 km in 36 azimuth directions and covers 46,527 square km area. The proposed noise limited contour based on 1000 kW ERP and 478 meters HAAT would extend an average of 111.1 km in 36 azimuth directions and cover 39,981.6 square km area. Therefore, it is believed the proposed KVOS-DT operation complies with Section 73.622(f)(5) of the Commission's rules. However, if a waiver of the rule is deemed necessary, it is hereby requested.

The following information provides pertinent data for the proposed KVOS-DT operation.

Name of the Licensee: Newport Television LLC

Station Location: WA-Bellingham

Channel: 35

Hours of Operation: Unlimited

Transmitter: Type Accepted

Antenna Type: Dielectric, TFU-18GTH O4

Beam Tilt: None

Antenna Coordinates: North Latitude: 48 deg 08 min 09 sec  
West Longitude: 121 deg 58 min 56 sec

Transmitter output power: As required to achieve authorized ERP

Maximum effective radiated power (Average): 1000 kW  
30.00 dBk

Elevation of site above mean sea level: 610 meters

Overall height of the tower above ground: 174 meters

Height of radiation center above ground (meters): 164 meters

Height of radiation center above mean sea level (meters): 774 meters

Height of radiation center above average terrain (meters): 478 meters

**Response to questions listed on the FCC Form 301, Section III-D-DTV**

**Engineering**

**Question 1. (a)**

KVOS-TV will operate its DTV operation on Channel 35 as established in 47 C.F.R. Section 73.622.

**Question 1. (d)**

KVOS-TV is proposing to modify its CP to operate from a new antenna site. The proposed noise limited contour would extend beyond the facilities established in Appendix B of the Seventh Report and Order (MB Docket No. 87-268). However, an interference study conducted (see attached Table I) according to the FCC OET Bulletin 69 indicates the proposed KVOS-DT operation would not cause any interference to other DTV stations exceeding the Commission's guidelines.

**Question 1. (e)**

The proposed DTV operation would serve 3,528,641 people within the noise limited service area as compared to 1,644,000 predicted population defined in the new DTV Table in Appendix B. As such, KVOS-DT proposed noise limited contour would serve 1,884,641 more people than the Appendix B population.

**Question 2.**

The attached environmental statement demonstrates that there will not be any significant environmental impact from the proposed DTV operation in accordance with 47 C.F.R. Section 73.1307.

**Question 3.**

The attached map shows the proposed KVOS-DT contour will encompass the allotted principal community of Bellingham, Washington (see Figure 1).

**Question 4.**

The proposed KVOS-DT facility complies with Section 73.1030 of the Commission's rules; therefore, notification to radio astronomy installations, radio receiving installations and FCC monitoring stations is not required.

**Question 5.**

KVOS-TV would be filing a request with the FAA for the construction of proposed tower. After receiving an approval from the FAA, KVOS-TV would register its tower with the Commission.

Table I

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

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 07-16-2008 Time: 10:56:09

Record Selected for Analysis

KVOS USERRECORD-01 BELLINGHAM WA US  
 Channel 35 ERP 1000. kW HAAT 478. m RCAMSL 00774 m  
 Latitude 048-08-09 Longitude 0121-58-56  
 Status APP Zone 2 Border  
 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 does not meet maximum height/power limits  
 Channel 35 ERP = 1000.00 HAAT = 478.

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	1000.000	443.1	110.0
45.0	1000.000	109.7	75.4
90.0	1000.000	168.6	80.7
135.0	1000.000	456.3	111.2
180.0	1000.000	623.5	121.9
225.0	1000.000	668.3	124.3
270.0	1000.000	678.1	124.9
315.0	1000.000	677.6	124.8

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KVOS 35 BELLINGHAM WA USERRECORD01

and station

SHORT TO: KTBW-TV 20 TACOMA WA BLCT 19840409KG  
 047-32-50 0122-47-39  
 Req. separation => 24.1 <= 96.6 Actual separation 89.3 Short 7.3( 65.2) km

SHORT TO: KWPX 33 BELLEVUE WA BLCT 19990312KE  
 047-30-17 0121-58- 6  
 Req. separation => 24.1 <= 96.6 Actual separation 70.2 Short 26.4( 46.1) km

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SHORT TO: KWPX 33 BELLEVUE WA BPCT 20050428AAJ  
 047-30-17 0121-58- 3  
 Req. separation => 24.1 <= 96.6 Actual separation 70.2 Short 26.4( 46.1) km

SHORT TO: KVOS-TV 35 BELLINGHAM WA DTVPLN DTVP1310  
 48 -40-40 122 -49-48  
 Req. separation 223.7 Actual separation 87.0 Short 136.7 km

SHORT TO: KAPP 35 YAKIMA WA BLCT 2022  
 046-31-57 0120-30-37  
 Req. separation 244.6 Actual separation 210.1 Short 34.5 km

LANDMOBILE SPACING VIOLATIONS FOUND

NONE

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 = 89.6km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

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 Start of Interference Analysis

	Proposed Station			
Channel	Call	City/State		ARN
35	KVOS	BELLINGHAM WA		USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
35	KORK-CA	PORTLAND OR	296.2	LIC	BLTTA	-20070831ACZ

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
35	KORK-CA	PORTLAND OR	BLTTA	-20070831ACZ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
32	KRCW-TV	SALEM OR	65.3	LIC	BLCT	-19990816KE
33	KRCW-TV	SALEM OR	1.2	APP	BPCDT	-20080619AKY
33	KRCW-TV	SALEM OR	1.2	PLN	DTVPLN	-DTVP1227
33	KRCW-TV	SALEM OR	1.2	LIC	BMLCDT	-20070123ABS
35	K35HU	GRAYS RIVER, ETC. OR	121.4	LIC	BLTT	-20061018ABS
35	K35CR	TILLAMOOK-LINCOLN CI OR	85.8	LIC	BLTTL	-19940829IB
35	KVOS-TV	BELLINGHAM WA	350.8	PLN	DTVPLN	-DTVP1310
35	KAPP	YAKIMA WA	205.8	LIC	BLCT	-2022
36	KORS-CA	SALEM OR	67.6	LIC	BLTTA	-20020722ABK

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43	KATU	PORTLAND OR	1.2	LIC	BLCDT	-20050407KXN
43	KATU	PORTLAND OR	1.2	PLN	DTVPLN	-DTVP1551
49	KPDX	VANCOUVER WA	0.5	LIC	BLCT	-19990909AAD
50	K50GG	SALEM OR	67.3	LIC	BLTTL	-20020916ABF
35	KVOS	BELLINGHAM WA	296.2	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station    2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
35	KVOS	BELLINGHAM WA	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Total scenarios =    1

Result key:            1  
 Scenario            1 Affected station            2  
 Before Analysis

Results for: 35A WA BELLINGHAM            USERRECORD01            APP

HAAT 478.0 m, ATV ERP 1000.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	3676267	38964.3
not affected by terrain losses	3528641	33548.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario    1

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## ENVIRONMENTAL PROTECTION ACT

According to the applicant, the proposed site is not located near any known wilderness area, wildlife preserve or Indian religious site. The proposed TV facilities will not affect or jeopardize the continued existence of any threatened or endangered species or their critical habitats.

The proposed TV facilities are not located in a flood plain area.

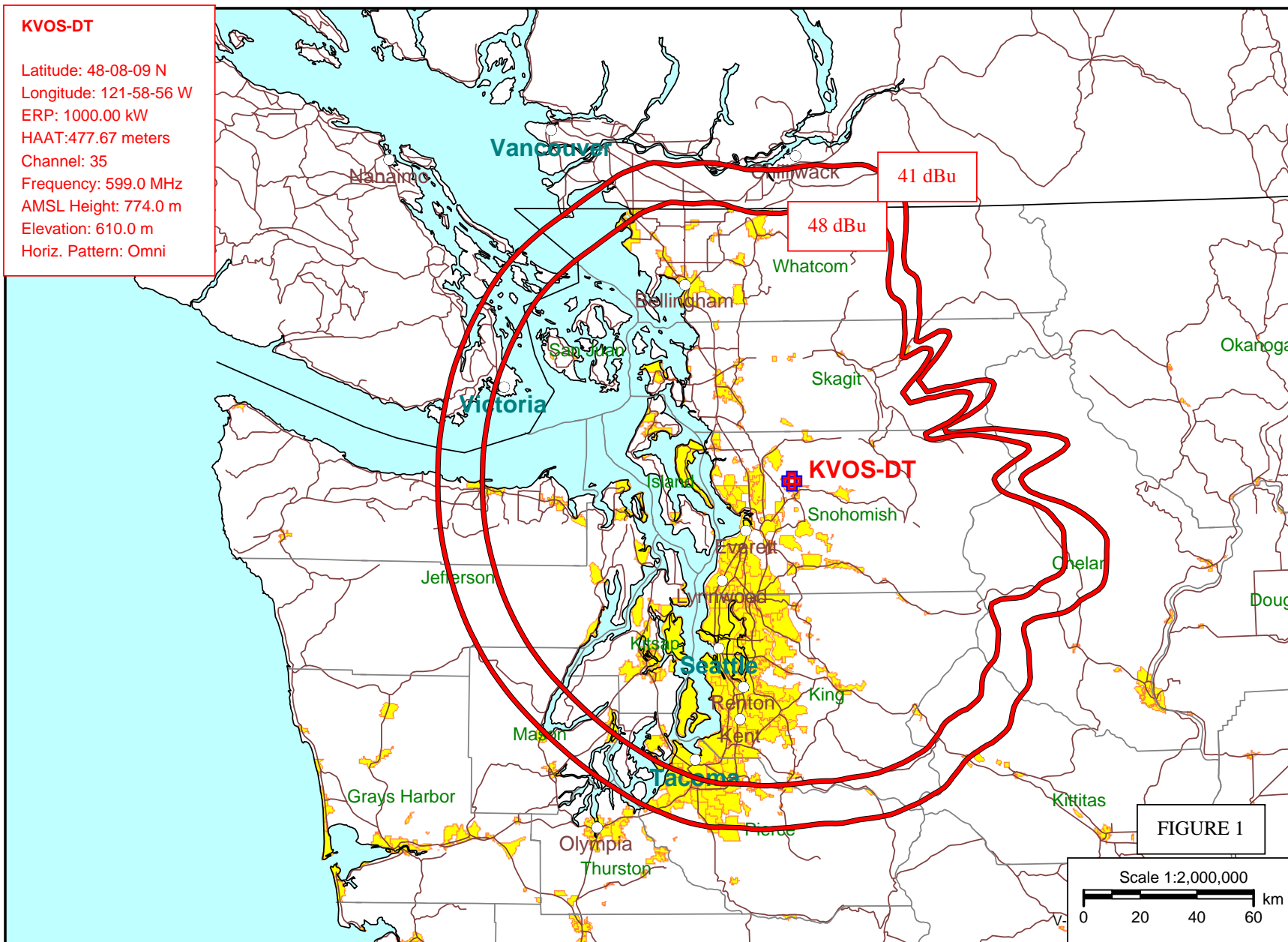
Construction of radio towers and a building to house the transmitter and associated equipment at the site are proposed. After the construction, the area surrounding the site will be restored, as close as possible, to its original condition. Therefore, the construction of the proposed TV facility does not involve significant changes in the surface features of the site. There is no proposal to equip the tower with high intensity white lights unless required by the FAA. However, the site is not located near any residential neighborhood.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 1000 kW and a radiation center of 164 meters above ground level, the proposed Channel 35 DTV operation would have a maximum of 50.9 microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ) RF field at 2 meters above the base of tower assuming an antenna field factor of 0.2 in the downward direction.

The Commission's guidelines for TV Channel 35 are 1,987  $\mu\text{W}/\text{cm}^2$  for the occupational/controlled, and 397  $\mu\text{W}/\text{cm}^2$  for the general population/uncontrolled environment.

The above analysis indicates that members of the public and personnel working around the KVOS-DT tower would not be exposed to RF fields exceeding the Commission's guidelines. With respect to work performed on the tower, KVOS-DT will establish procedures to ensure that workers are not exposed to RF fields above the Commission's guidelines, by reducing or turning off the power, as appropriate.

For the reasons stated above, it is believed this proposal complies with Section 1.1307(a) and (b) of the Commission's Rules; therefore, under Section 1.1306, it is categorically excluded from environmental processing.



COMPUTED CONTOURS FOR THE PROPOSED DTV OPERATION OF KVOS-DT, BELLINGHAM, WASHINGTON