

TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
CLASS A TV STATION KKEI-CA
FACILITY ID 71078
PORTLAND, OREGON
CH 38 150 KW

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for construction permit for Class A TV station KKEI-CA at Portland, Oregon (Facility ID: 71078; File No. BLTTA-20020722ABI). Specifically, this application proposes to modify the KKEI-CA licensed operation by changing the transmitter site location, increasing the non-directional effective radiated power (ERP) and increasing the antenna radiation center height above mean sea level (RCAMSL). No other changes are proposed. This application is considered a "minor change" in facilities pursuant to Section 73.3572(a)(2), as there will be no change in frequency (output channel) and the proposed 74 dBu contour will overlap a portion of the licensed 74 dBu contour (Figure 1).

It is proposed to operate on channel 38 (614-620 MHz) with a "plus" carrier frequency offset and employing a Coel non-directional CO-8U/8 panel antenna. The ERP will be 150 kW. The antenna will be mounted at the 183 meter (600 foot) level on the existing tower. The FCC Tower Registration Number for the existing tower is 1204059.

Response to Paragraph 13(a) - TV Broadcast Analog Protection

A study has been conducted using the provisions of Section 74.705 which indicates that the proposed KKEI-CA operation will not create prohibited interference to other existing, authorized or proposed NTSC full-power stations, except with respect to NTSC station KNMT(TV) on channel 24 at Portland, Oregon, a pending rule making (BPRM-20000717ABY) for a new NTSC operation on channel 42 at Portland, Oregon, 2 pending applications (BPCT-19960724LF, BPCT-19960920WH) for NTSC operation on channel 40 at Portland, Oregon and a pending application (BPCT-19960726KN) for NTSC operation on channel 41 at Portland, Oregon. However with respect to each facility, interference calculations have been made using the procedures

outlined in the FCC's OET-69 Bulletin.¹ Interference calculations for the proposed KKEI-CA operation are summarized below (see also Figure 2).

Protected NTSC Station	FCC Service Population	Proposed Interference Population
KNMT(TV), Ch. 24, Portland, OR Licensed (BLCT-19891205KH)	--	0 (0.0%)
NEW, Ch. 40, Portland, OR BPCT-19960920WH	1,872,242	513 (0.03%)
NEW, Ch. 40, Portland, OR BPCT-19960724LF	--	0 (0.0%)
NEW, Ch. 41, Portland, OR BPET-19960726KN	--	0 (0.0%)
NEW, Ch. 42, Portland, OR BPRM-20000717ABY	--	0 (0.0%)

The results of the OET Bulletin No. 69 interference analyses indicate that the proposed KKEI-CA operation complies with the FCC's 0.5% "rounding allowance" for such calculations (see paragraph 78 of MM Docket No. 00-10). Thus, it is believed that the KKEI-CA operation complies with the FCC's interference standards towards all NTSC stations and allotments.

Response to Paragraph 13(b) - DTV Station Protection

Calculations based on OET Bulletin No. 69 indicate that the proposed KKEI-CA operation on channel 38 will not cause prohibited interference to any allotted, proposed or actual DTV operating facilities on channels 38 or 39 (channel 37 is reserved for radio astronomy). Interference calculations for the proposed KKEI-CA operation are summarized below (see also Figure 2).

Protected DTV Station	FCC Service Population	Proposed Interference Population
KDRV-DT, Ch. 38, Medford, OR DTV Allotment	313,945	298 (0.10%)
Licensed (BLCDT-20030422AAK)	313,945	10 (0.10%)

¹The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed. A Sun based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin No. 69.

Protected DTV Station	FCC Service Population	Proposed Interference Population
KTNW-DT, Ch. 38, Richland, WA Application (BMPEDT-20011003ABK) DTV Allotment Licensed (BLEDT-20030429AAW)	-- -- --	0 (0.00%) 0 (0.00%) 0 (0.00%)
KOMOTV, Ch. 38, Seattle, WA DTV Allotment Licensed (BLCDT-19991221AAQ)	3,061,101 3,061,101	1,845 (0.06%) 488 (0.02%)
KOAC-DT, Ch. 39, Corvallis, OR DTV Allotment (Ch. 39) Authorized CP (BMPEDT-20000414ABA)	916,837 916,837	0 (0.00%) 2,328 (0.25%)

As shown above, the proposed operation complies with the FCC's 0.5% "rounding allowance" for such calculations (see paragraph 78 of MM Docket No. 00-10). Thus, it is believed that the proposed KKEI-CA operation complies with the FCC's interference standards towards all DTV stations and allotments.

Response to Paragraph 13(c) - LPTV/TV Translator Protection

A study has been conducted using the provisions of Section 74.707 which indicates that the KKEI-CA proposal will not cause prohibited interference to other existing, authorized or proposed LPTV stations except with respect to LPTV stations K38CZ on channel 38 at Lincoln City/Newport, Oregon, K38GS on channel 38 at Grays River, Lebam, Washington, K20DD on channel 38 at Albany, Oregon, and a pending application (BNPTTL-20000829ANO) for a new LPTV station on channel 38 at Sweet Home, Oregon. However, with respect to each station, interference calculations have been made using the procedures outlined in the FCC's OET-69 Bulletin.

Interference calculations for the proposed KKEI-CA operation are summarized below (see also Figure 2).

LPTV Station	FCC Service Population	Proposed Interference Population
K38CZ, Ch. 38, Lincoln City/Newport, OR Licensed (BLTT-19940131JG)	--	0 (0.00%)
K38GS, Ch. 38, Grays River, Lebam, WA Licensed (BLTT-20040412ACX)	--	0 (0.00%)
K20DD, Ch. 38, Albany, OR Application (BPTTL-19990316JG)	135,059	260 (0.19%)
NEW, Ch. 38, Sweet Home, OR Application (BNPTTL-20000829ANO)	--	0 (0.0%)

The results of the OET Bulletin No. 69 interference analyses indicate that the proposed operation complies with the FCC's 0.5% "rounding allowance" for such calculations (see paragraph 78 of MM Docket No. 00-10). Thus, it is believed that the proposed KKEI-CA operation complies with the FCC's interference standards towards all LPTV and Class A stations.

US-Canadian TV Agreement Compliance

The proposed channel 38 operation will be located 306 kilometers from the closest point of the US-Canadian common border. Therefore, consideration must be given to the existing US-Canadian TV Agreement (1994) and Letter of Understanding (LOU) between the FCC and Industry Canada related to DTV service along the common border (September 12, 2000). Pursuant to the existing Agreement and LOU, NTSC Low Power TV stations will be referred if the pertinent interfering contour would fall within the territory of the other country. The pertinent interfering contour applicable towards co-channel NTSC stations is the 19 dBu, F(50,10) contour. The pertinent interfering contour applicable towards co-channel DTV operations is the 31.8 dBu, F(50,10) contour. Figure 3 depicts the locations of both the 19 dBu, F(50,10) and 31.8 dBu, F(50,10) interfering contours based on the proposed NTSC channel 38 facilities. As indicated on Figure 3, neither the 19 dBu, F(50,10) nor the 31.8 dBu, F(50,10) contour overlaps Canadian land area. Therefore, it is not believed necessary to refer the proposal to Canada.

Response to Paragraph 14 - Environmental Protection Act

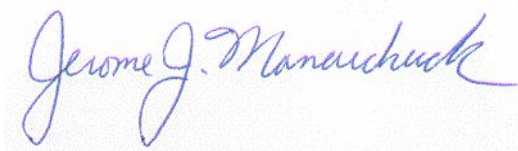
The proposed KKEI-CA facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation."² The calculated power density at the base of the tower was calculated using the appropriate equation on Page 13 of the Bulletin. Based on a conservative relative field factor of 0.5 (for angles below 60 degrees downward, a visual effective radiated power of 150 kilowatts and 10 percent aural power, the calculated power density at 2 meters above ground at the tower base will be 0.0191 mW/cm².

² See *Report and Order* in ET Docket 93-62, FCC 96-326, adopted August 1, 1996, 11 FCC Rcd 15123 (1997). See also *First Memorandum Opinion and Order*, ET Docket 93-62, FCC 96-487, adopted December 23, 1996, 11 FCC Rcd 17512 (1997), and *Second Memorandum Opinion and Order and Notice of Proposed Rulemaking*, ET Docket 93-62, FCC 97-303, adopted August 25, 1997.

This is 4.7% of the recommended limit of 0.41 mW/cm² for channel 38, applicable to general population/uncontrolled exposure areas. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the FCC's RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

Finally, it is noted that this technical exhibit only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already has been provided to the FCC by the tower owner as part of the tower registration process.

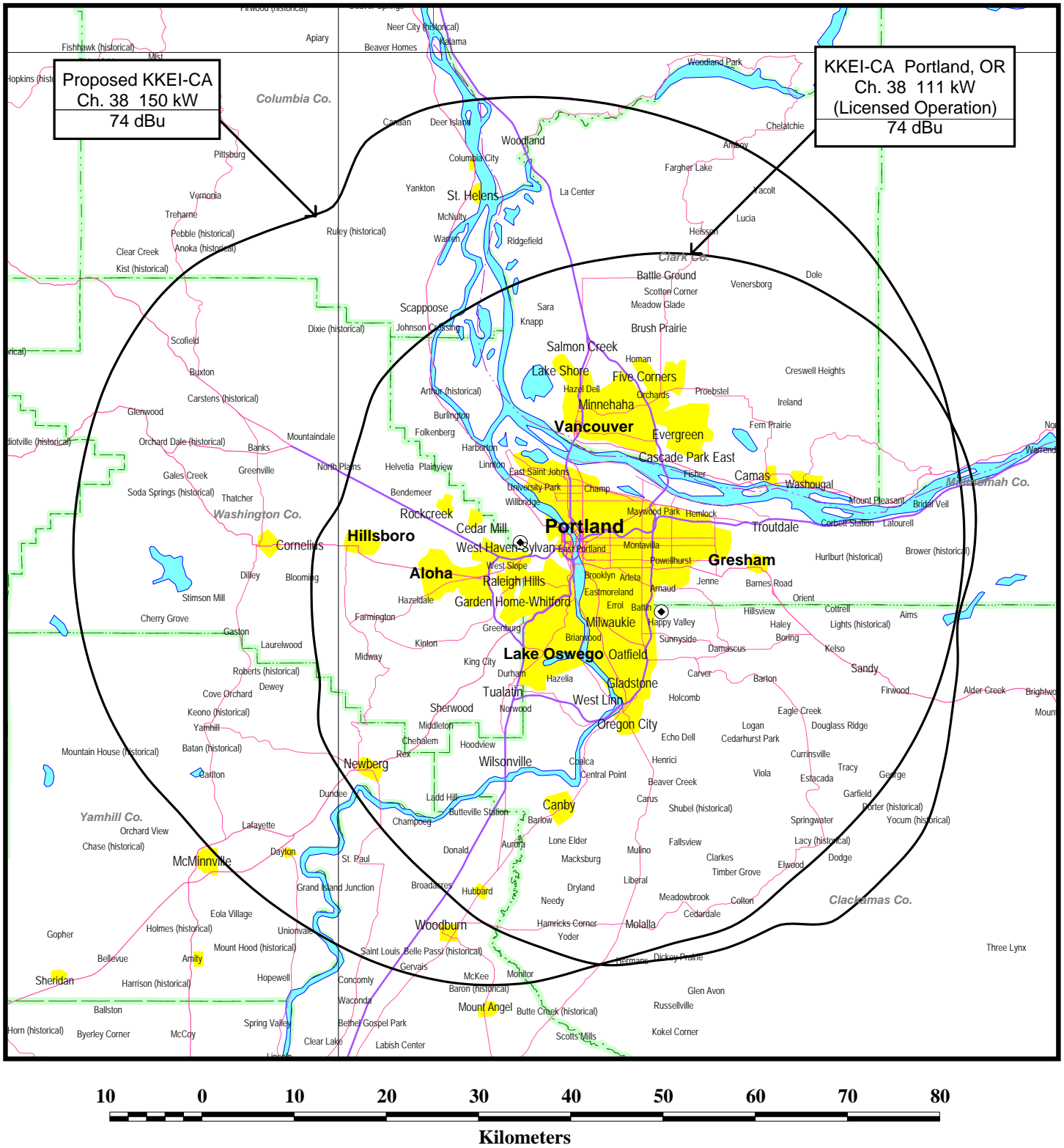


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May 28, 2004

Figure 1



FCC PREDICTED 74 dBu CONTOURS

CLASS A STATION KKEI-CA
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

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OET-69 ANALYSIS WITH RESPECT TO TV/DTV/LPTV/CLASS A STATIONS

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 05-21-2004 Time: 16:03:59

Record Selected for Analysis

KKEI-CA USERRECORD-01 PORTLAND OR US
Channel 38 ERP 150. kW HAAT 475. m RCAMSL 00525 m
Latitude 045-31-21 Longitude 0122-44-45
Status APP Zone 2 Border Offset +
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

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	74.0 dBu F(50,50) (km)
0.0	150.000	453.2	48.2
45.0	150.000	474.9	49.0
90.0	150.000	450.5	48.1
135.0	150.000	415.0	46.9
180.0	150.000	441.8	47.8
225.0	150.000	421.6	47.1
270.0	150.000	459.1	48.4
315.0	150.000	366.9	45.0

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Summary of OET-69 Analysis with Respect to TV Stations

Facility Number	Channel	Call	City, State	Status	Application Prefix	Application Reference Number
1	24	KNMT	PORTLAND, OR	LIC	BLCT	19891205KH
2	40	NEW	PORTLAND, OR	APP	BPCT	19960920WH
3	40	NEW	PORTLAND, OR	APP	BPCT	19960724LF
4	41	NEW	PORTLAND, OR	APP	BPET	19960726KN
5	42	NEW	PORTLAND, OR	APP	BPRM	2000717ABY

Summary of Interference Analysis for Worst-Case Scenarios							
Facility Number	Interference Population Before Analysis	Interference Population After Analysis	Baseline Population	Net Change in Interference	Percent of Baseline	Permissible Percent of Baseline	Result
1	--	--	--	*	--	0.50	pass
2	76,311	76,824	1,872,242	513	0.03	0.50	pass
3	--	--	--	*	--	0.50	pass
4	--	--	--	*	--	0.50	pass
5	--	--	--	*	--	0.50	pass

* Proposal causes no interference.

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Summary of OET-69 Analysis with Respect to DTV Stations

Facility Number	Channel	Call	City State	Status	Application Prefix	Application Reference Number
1	38	KDRV-DT	MEDFORD, OR	LIC	BLCDT	20030422AAK
1	38	KDRV-DT	MEDFORD, OR	ALT	DTVPLN	DTVP1064
3	38	KTNW-DT	RICHLAND, WA	APP	BMPEDT	20011003ABK
4	38	KTNW-DT	RICHLAND, WA	ALT	DTVPLN	DTVP1075
5	38	KTNW-DT	RICHLAND, WA	LIC	BLEDT	20030429AAW
6	38	KOMO-DT	SEATTLE, WA	ALT	DTVPLN	DTVP1076
7	38	KOMO-DT	SEATTLE, WA	LIC	BLCDT	19991221AAQ
8	39	KOAC-DT	CORVALLIS, OR	CP	BMPEDT	20000414ABA
9	39	KOAC-DT	CORVALLIS, OR	ALT	DTVPLN	DTVP1102

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Summary of OET-69 Analysis with Respect to DTV Stations

Summary of Interference Analysis for Worst-Case Scenarios							
Facility Number	Interference Population Before Analysis	Interference Population After Analysis	Baseline Population	Net Change in Interference	Percent of Baseline	Permissible Percent of Baseline	Result
1	0	10	313,945	10	0.00	0.50	pass
2	0	298	313,945	298	0.00	0.5	pass
3	--	--	--	*	--	0.5	pass
4	--	--	--	*	--	0.5	pass
5	--	--	--	*	--	0.5	pass
6	920	2,765	3,061,101	1,845	0.06	0.5	pass
7	10,791	11,279	3,061,101	488	0.02	0.5	pass
8	194,393	196,721	916,387	2,328	0.25	0.5	pass
9	--	--	--	*	--	0.5	pass

* Proposal causes no interference.

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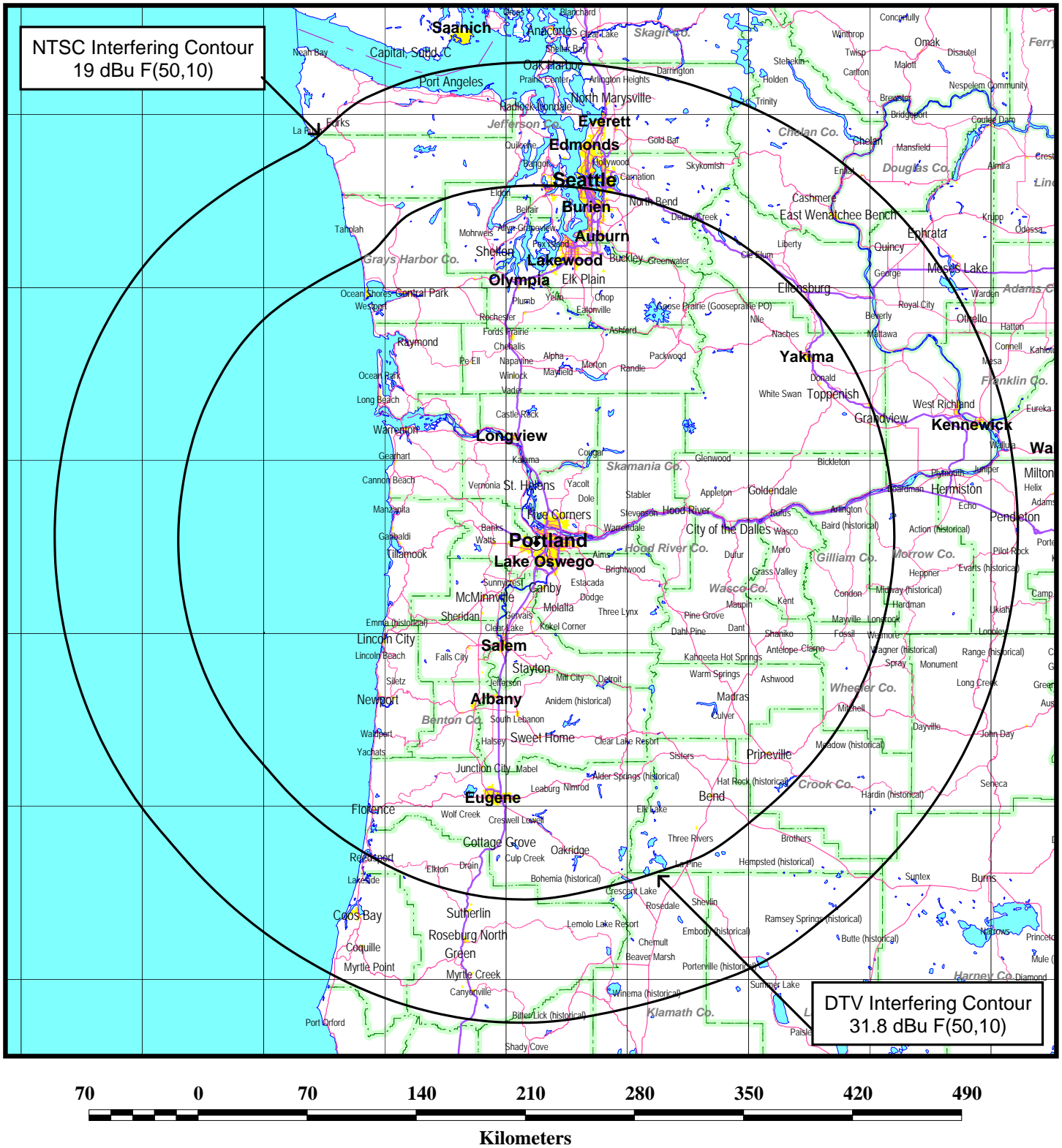
Summary of OET-69 Analysis with Respect to LPTV/TV Translator Stations

Facility Number	Channel	Call	City State	Status	Application Prefix	Application Reference Number
1	38	K38CZ	LINCOLN CITY, OR	LIC	BLTT	19940131JG
2	38	K38GS	GRAY RIVER, WA	LIC	BLTT	20040412ACX
3	38	K20DD	ALBANY, OR	APP	BPTTL	19990316JG
4	38	NEW	SWEET HOME, OR	APP	BNPTT	20000829ANO

Summary of Interference Analysis for Worst-Case Scenarios							
Facility Number	Interference Population Before Analysis	Interference Population After Analysis	Baseline Population	Net Change in Interference	Percent of Baseline	Permissible Percent of Baseline	Result
1	--	--	--	*	--	0.50	pass
2	--	--	--	*	--	0.50	pass
3	54,044	54,304	135,059	260	0.19	0.50	pass
4	--	--	--	*	--	0.50	pass

* Proposal causes no interference.

Figure 3



CANADIAN NTSC/DTV ALLOCATION STUDY

CLASS A STATION KKEI-CA
PORTLAND, OREGON
CH 38 150 KW

du Treil, Lundin & Rackley, Inc. Sarasota, Florida