TECHNICAL EXHIBIT
MINOR CHANGE TV TRANSLATOR DTV FLASH-CUT
DISPLACEMENT APPLICATION FOR CONSTRUCTION PERMIT
STATION K54DX (FACILITY ID 33896)
ELLENSBURG, WASHINGTON

FEBRUARY 16, 2006

CH 7 0.3 KW-ND

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Technical Narrative

This technical exhibit supports a minor change digital television (DTV) flash-cut displacement application from TV translator station K54DX at Ellensburg, Washington (Facility ID 33896).

According to the Federal Communications Commission (FCC) database, station K54DX is licensed for an analog (NTSC) operation on channel 54 with no carrier offset (BLTTL-19940311IE). A directional antenna (DA) is employed. The maximum visual effective radiated power (ERP) is 0.61 kilowatts (kW). The antenna center of radiation is11 meters above ground level (AGL), and 986 meters above mean sea level (AMSL). The transmitter site coordinates are 46-53-15, 120-26-30 (NAD-27). There is no FCC antenna structure registration number for the supporting structure.

Station K54DX currently operates as an analog station on an out-of-core channel (54). Station K54DX proposes a flash-cut displacement application to operate DTV on in-core channel 7. No change in site (46-53-15, 120-26-30) or city of assignment (Ellensburg, WA) is proposed. It is proposed to use a Scala model TVO-2 non-directional antenna system fed by a 0.32 kW DTV transmitter. The proposed ERP is 0.3 kW. The proposed antenna center of radiation will be 11 meters above ground level (AGL), and 986.3 meters AMSL. Since there is no proposed change in the overall height of the existing structure, the Federal Aviation Administration (FAA) is not being notified of the proposed K54DX DTV operation.

The gain for the Scala model TVO-2 antenna system is 1 (0 dB). The antenna will be coupled to the transmitter through 18.3 meters (60 feet) of 7/8 inch air dielectric

flexible coaxial transmission line. The efficiency of the line on channel 7 is 92.9%. The TV translator DTV transmitter power output (TPO) will be 0.32 kW. This combination results in the proposed TV translator DTV ERP of 0.3 kW-ND.

There are no known full service AM or TV broadcast stations within 5 kilometers (3.1 miles) of the K54DX site. Station KQBE(FM) on channel 276C2 (103.1 MHz) at Ellensburg, WA is located near the K54DX site and is the only full service FM station within 5 kilometers of the K54DX site. Although no adverse electromagnetic interaction is expected, the applicant recognizes its responsibility to correct problems that its proposed TV translator DTV operation may cause.

Allocation Considerations

A study has been conducted using the provisions of Section 74 Subpart G of the FCC rules to assure that the proposal will not create prohibited interference with other authorized or pending analog (NTSC) and digital (DTV) full-power TV, low power television (LPTV), TV translator, and Class A TV stations. The proposed K54DX channel 7 TV translator DTV operation was studied using the FCC's recently adopted LPTV-DTV rules and the interference procedures outlined in the FCC's OET-69 Bulletin. In accordance with current FCC processing policy, a 1 kilometer grid and the 1990 US Census was employed. The proposed K54DX channel 7 TV translator DTV operation complies with the FCC's allocation standards (ie, less than 0.5% new interference caused to other pertinent assignments).

The K54DX site is 234 kilometers from the nearest point of the US/Canada border. Consideration has been given to Canadian TV and DTV assignments. There is one known Canadian analog (NTSC) allotments on channel 7 within 400 kilometers of the K54DX site (Class B allotment for CHBC-TV at Vernon, BC, 386 km to north). There is one Canadian DTV allotment on channel 7 within 400 kilometers of the K54DX site (Class B allotment at Hope, BC, 287 km to north-northwest). Figure 2 shows the protected contours for the 2 Canadian allotments and the proposed K54DX co-channel (7) DTV interfering

contour (7.4 dBu, F(50,10)) and NTSC interfering contour (22.2 dBu, F(50,10)). The proposed K54DX interfering contours do not overlap Canadian land area.

It is believed the proposed K54DX channel 7 TV translator DTV operation complies with the US/Canada TV/DTV Agreements. The applicant recognizes that it is a secondary service and must protect full service TV and DTV facilities if it should cause prohibited interference.

The closest point of the Mexican border is more than 1600 kilometers to the south. The closest FCC monitoring station is at Ferndale, Washington, approximately 278 kilometers to the northwest. The closest point of the National Radio Quiet Zone (VA/WV) is more than 3300 kilometers to the east. The Table Mountain Radio Quiet Zone (CO) is more than 1400 kilometers to the southeast. The closest radio astronomy site using channel 37 is at Brewster, Washington, approximately 149 kilometers to the northeast. These separations are considered sufficient to not be a coordination concern.

As noted above, interference calculations have been made using the procedures outlined in the FCC's OET-69 Bulletin.[1] The proposed K54DX channel 7 TV translator DTV operation complies with the FCC's "de minimis" (0.5%) interference policy. The applicant recognizes the proposal is secondary to authorized full-service analog and DTV operations. The applicant understands that it must correct and/or eliminate prohibited interference that may result from its proposed operation. If necessary, a waiver of the FCC rules is respectfully requested based on use of the procedures outlined in the FCC's OET-69 Bulletin.

Radiofrequency Electromagnetic Field Exposure

The proposed K54DX facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. An ERP

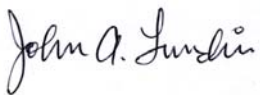
[1] The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 1 km was employed. A Sun based processor 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.

of 0.3 kW was assumed. A relative field value of 0.5 was assumed for the proposed antenna's downward radiation (see Figure 1). The calculated power density at a point 2 meters (6.6 feet) above ground level is 0.030935 mW/cm^2. This is less than 16% of the FCC's recommended limit of 0.2 mW/cm^2 for channel 7 for an "uncontrolled" environment. It is less than 4% of the FCC's recommended limit for a "controlled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, 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.

Figure 3 is a map showing the predicted 74 dBu F(50,50) contour for the present K54DX analog operation on channel 54 (0.61 kW-DA). The map also shows the predicted 48 dBu F(50,90) contour for the proposed K54DX TV translator DTV operation on channel 7 (0.3 kW-ND). As shown, there is overlap between the present and proposed K54DX contours.

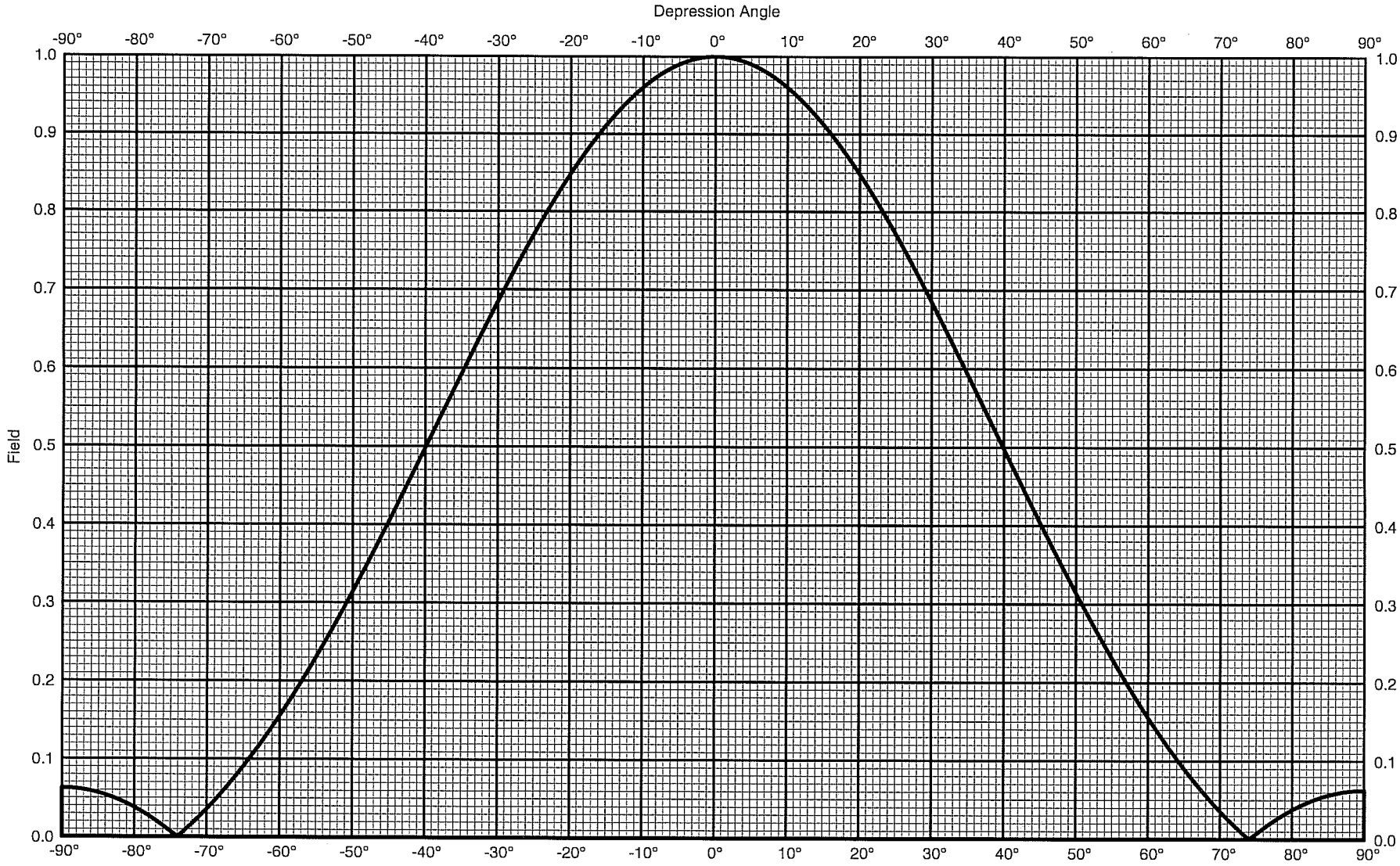
If there are questions concerning this technical statement or the technical portion of this application, please communicate with the office of the undersigned.



John A. Lundin

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-6000 voice
(941) 329-6030 fax
john@DLR.com e-mail

February 16, 2006



KATHREIN
SCALA DIVISION
Post Office Box 4580
Medford, OR 97501 (USA)
Phone:(541)779-6500
Fax:(541)779-3991
http://www.kathrein-scala.com

TVO-2

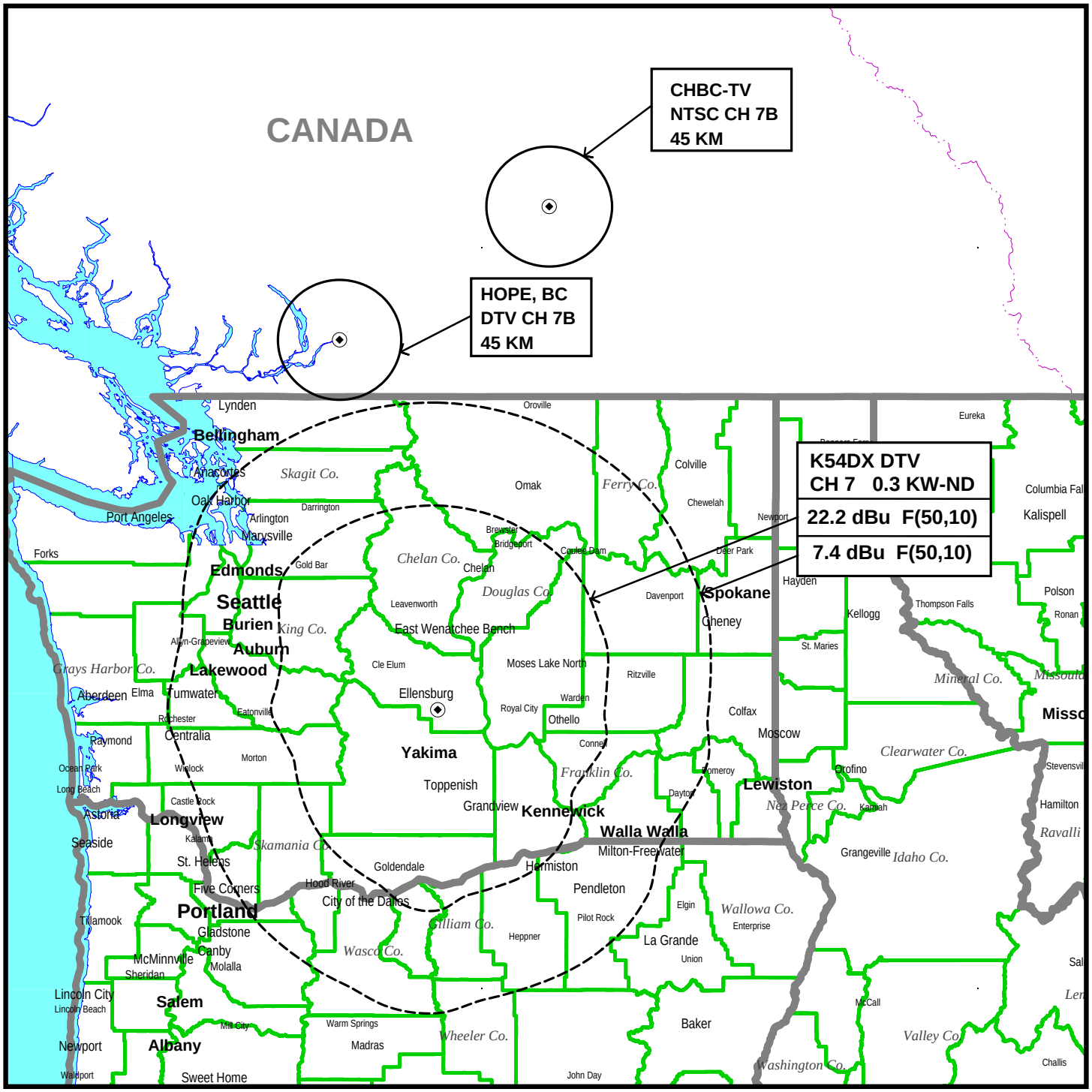
0.0 dBd gain

Channel - 7

Horizontal Polarization

Vertical plane Pattern

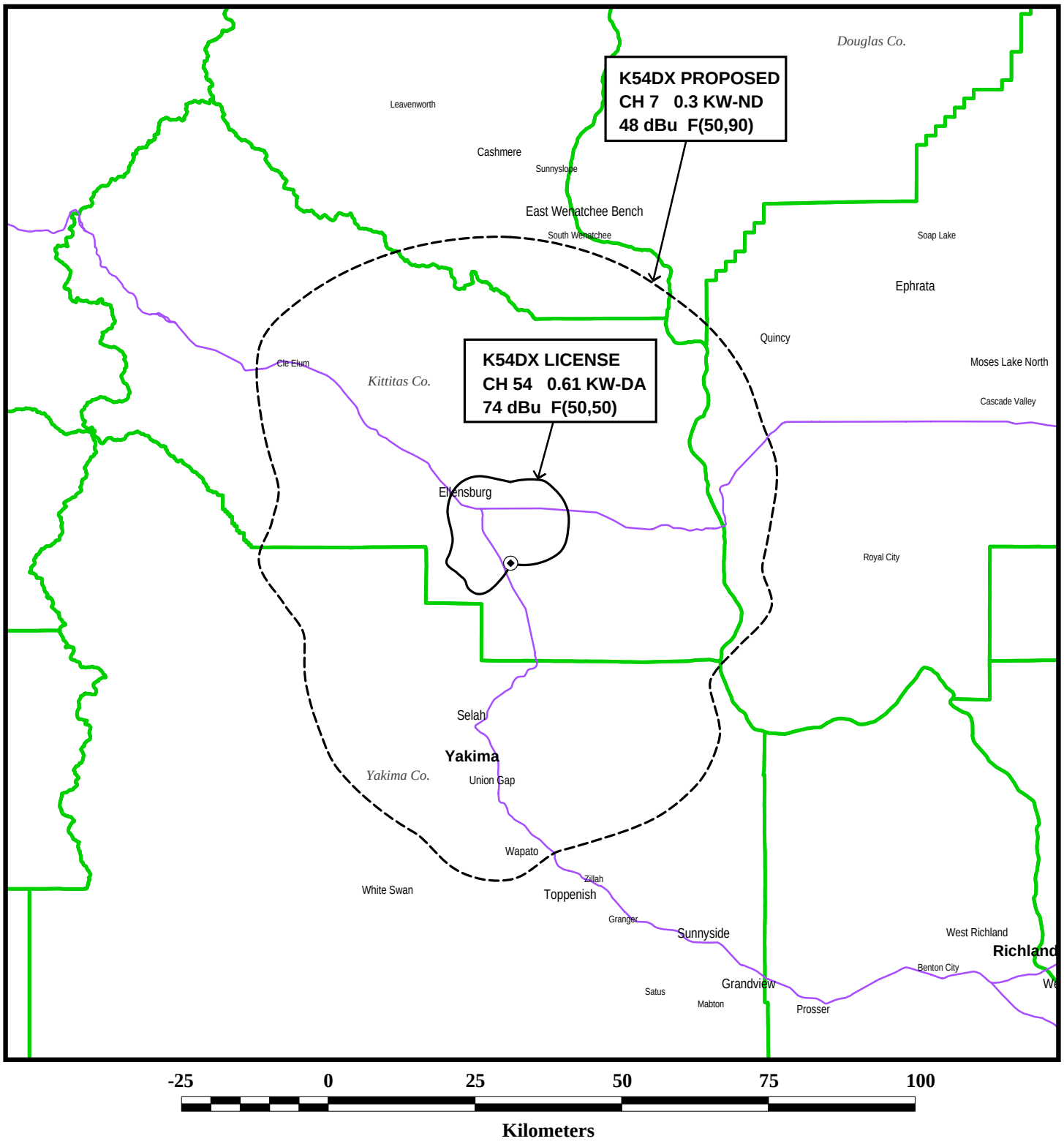
Figure 1



CANADA ALLOCATION

STATION K54DX
ELLENSBURG, WASHINGTON
CH 7 0.3 KW-ND

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



PREDICTED COVERAGE CONTOURS

STATION K54DX
ELLENSBURG, WASHINGTON
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida