

TECHNICAL EXHIBIT
MINOR CHANGE TV TRANSLATOR DTV FLASH-CUT
APPLICATION FOR CONSTRUCTION PERMIT
STATION K42CM (FACILITY ID 33895)
CENTRALIA, WASHINGTON

FEBRUARY 15, 2006

CH 42 12 KW-DA

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Table of Contents

Technical Narrative

Figure 1	Antenna Vertical Pattern
Figure 2	Canada Allocation Study
Figure 3	Predicted LPTV Contours

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Technical Narrative

This technical exhibit supports a minor change digital television (DTV) flash-cut application from TV translator station K42CM at Centralia, Washington (Facility ID 33895).

According to the Federal Communications Commission (FCC) database, station K42CM is licensed for an analog (NTSC) operation on channel 42 with a minus (-) carrier offset (BLTT-19910320IO). A Bogner model B4UG directional antenna (DA) system is employed. The antenna pattern is a peanut shape with the major lobes oriented toward 15 and 165 degrees True. The maximum visual effective radiated power (ERP) is 10.2 kilowatts (kW). The antenna center of radiation is 46 meters above ground level (AGL), and 487 meters above mean sea level (AMSL). The transmitter site coordinates are 46-33-16, 123-03-26 (NAD-27). The FCC antenna structure registration number is 1033564.

Station K42CM proposes a flash-cut application to operate DTV on its in-core channel 42. No change in site (46-33-16, 123-03-26), supporting structure (1033564), antenna height (Rc=487 m AMSL) or city of assignment (Centralia, WA) is proposed. It is proposed to use a Scala model SL-8 directional antenna system with the major lobe oriented toward 110 degrees True. The antenna will be fed by a DTV transmitter having a power output of 1.16 kW (average). The transmitter will be fed through approximately 200 feet of 1-5/8 inch air dielectric coaxial transmission line (efficiency=74.8%). The proposed maximum ERP is 12 kW-DA. 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 K42CM DTV operation.

There are no other known AM broadcast stations within 5 kilometers (3.1 miles) of the K42CM site. The following TV and FM stations are located within 3 kilometers of the K42CM site.

<u>Station</u>	<u>Channel</u>	<u>Distance</u>
KCKA(TV), Centralia, WA	NTSC-15	0.0 km
KCKA-DT, Centralia, WA	DTV-19	0.0
K25CH, Centralia, WA	NTSC-25	0.0
K220HE, Chehalis, WA	220D	0.0
K211AP, Centralia, WA	211D	0.1
KMNT(FM), Chehalis, WA	282C3	0.1

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 K42CM channel 42 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 K42CM channel 42 TV translator DTV operation complies with the FCC's allocation standards (ie, less than 0.5% new interference caused to other pertinent assignments).

The K42CM site is 188 kilometers from the nearest point of the US/Canada border. Consideration has been given to Canadian TV and DTV assignments. The only Canadian TV/DTV allotment on channel 42 within 400 kilometers of the K42CM site is the analog (NTSC) Class C TV allotment at Vancouver, British Columbia (311.8 km to the north). The proposed K42CM co-channel analog interfering contour (30.2 dBu, F(50,10)) does not

extend into Canadian territory (see Figure 2). There are no known Canadian DTV allotments on channel 42 within 400 kilometers of the K42CM site. It is believed the proposed K42CM channel 42 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-southeast. The closest FCC monitoring station is at Ferndale, Washington, approximately 269 kilometers to the north. The closest point of the National Radio Quiet Zone (VA/WV) is more than 3500 kilometers to the east. The Table Mountain Radio Quiet Zone (CO) is more than 1600 kilometers to the southeast. The closest radio astronomy site using channel 37 is at Brewster, Washington, approximately 309 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 K42CM channel 42 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 K42CM facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. An ERP of 12 kW was assumed. A relative field value of 0.3 was assumed for the proposed antenna's downward radiation (see Figure 1). The calculated power density at a point 2 meters (6.6 feet)

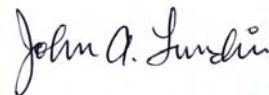
¹ The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 1 km was employed. A Sun based processor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

above ground level is 0.018638 mW/cm^2 . This is less than 5% of the FCC's recommended limit of 0.43 mW/cm^2 for channel 42 for an "uncontrolled" environment. It is less than 1% 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 K42CM analog operation on channel 42 (10.2 kW-DA). The map also shows the predicted 51 dBu F(50,90) contour for the proposed K42CM TV translator DTV operation on channel 42 (12 kW-DA). As shown, there is overlap between the present and proposed K42CM contours.

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

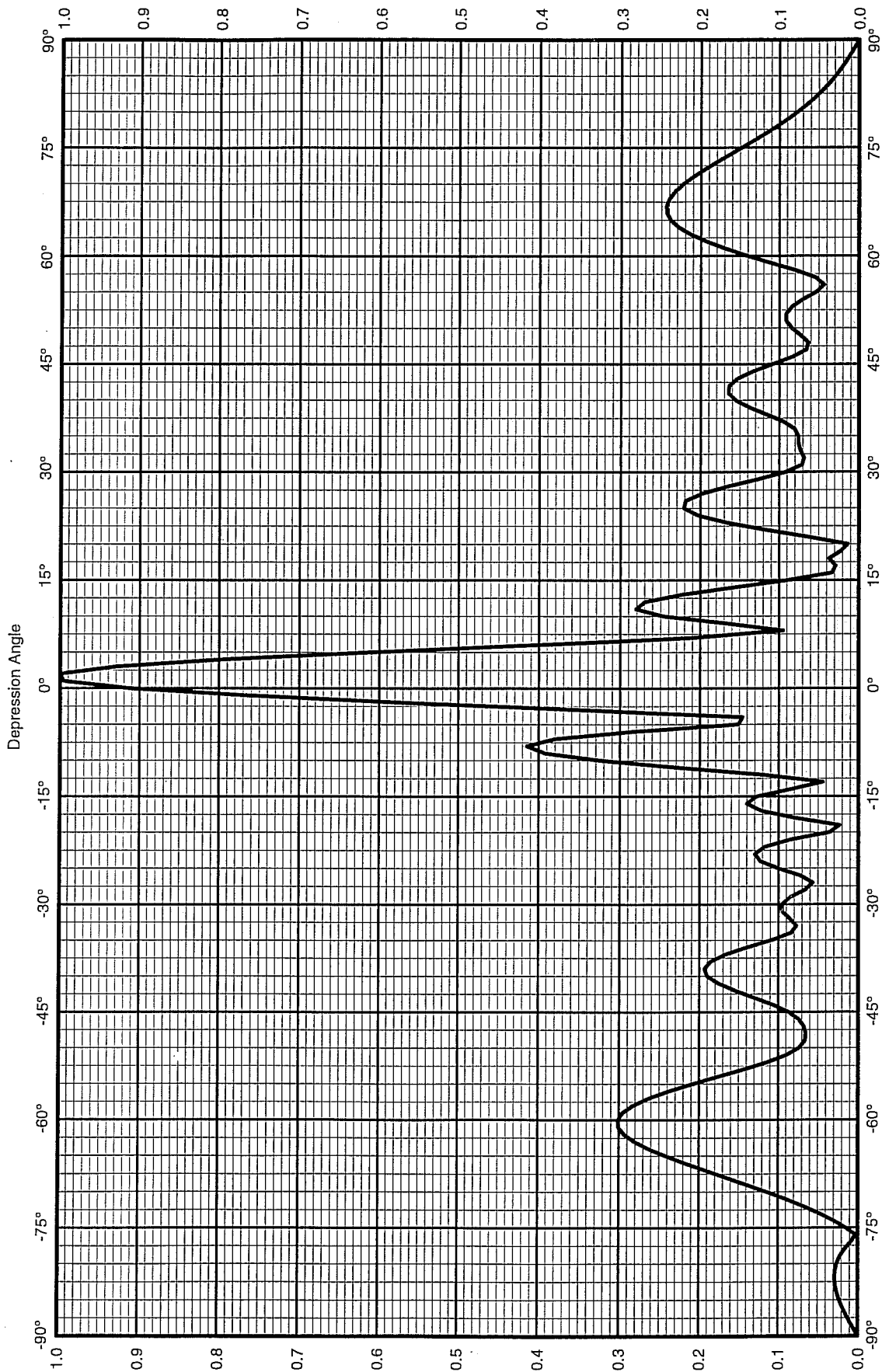


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Figure 1



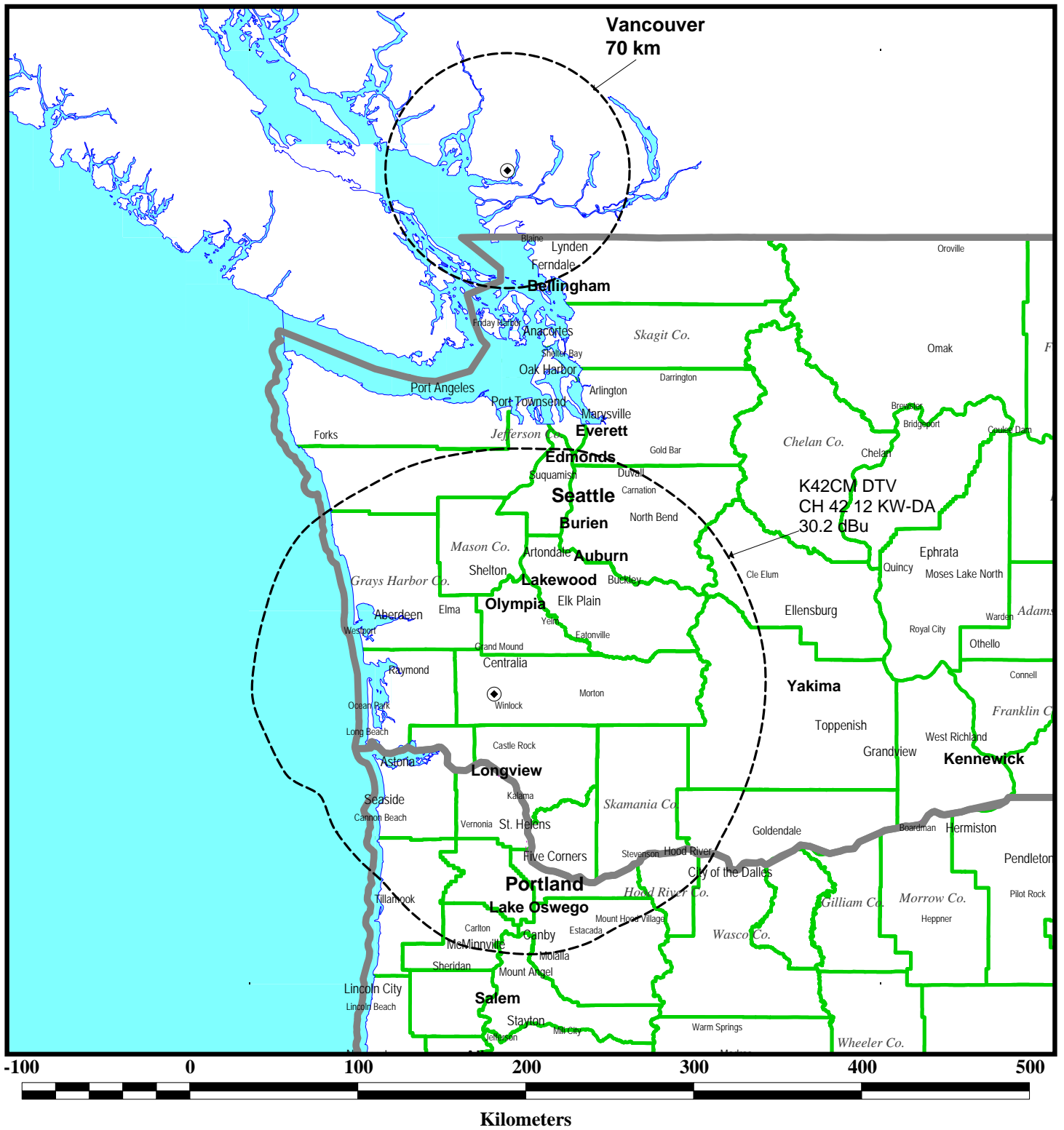
Horizontal polarization
Vertical radiation pattern

SL-8 Paraslot UHF-TV Antenna
With 1.75 deg electrical downtilt
Maximum gain: 11.4 dBd
Power multiplier: 13.8

KATHREIN
SCALA DIVISION

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

Figure 2

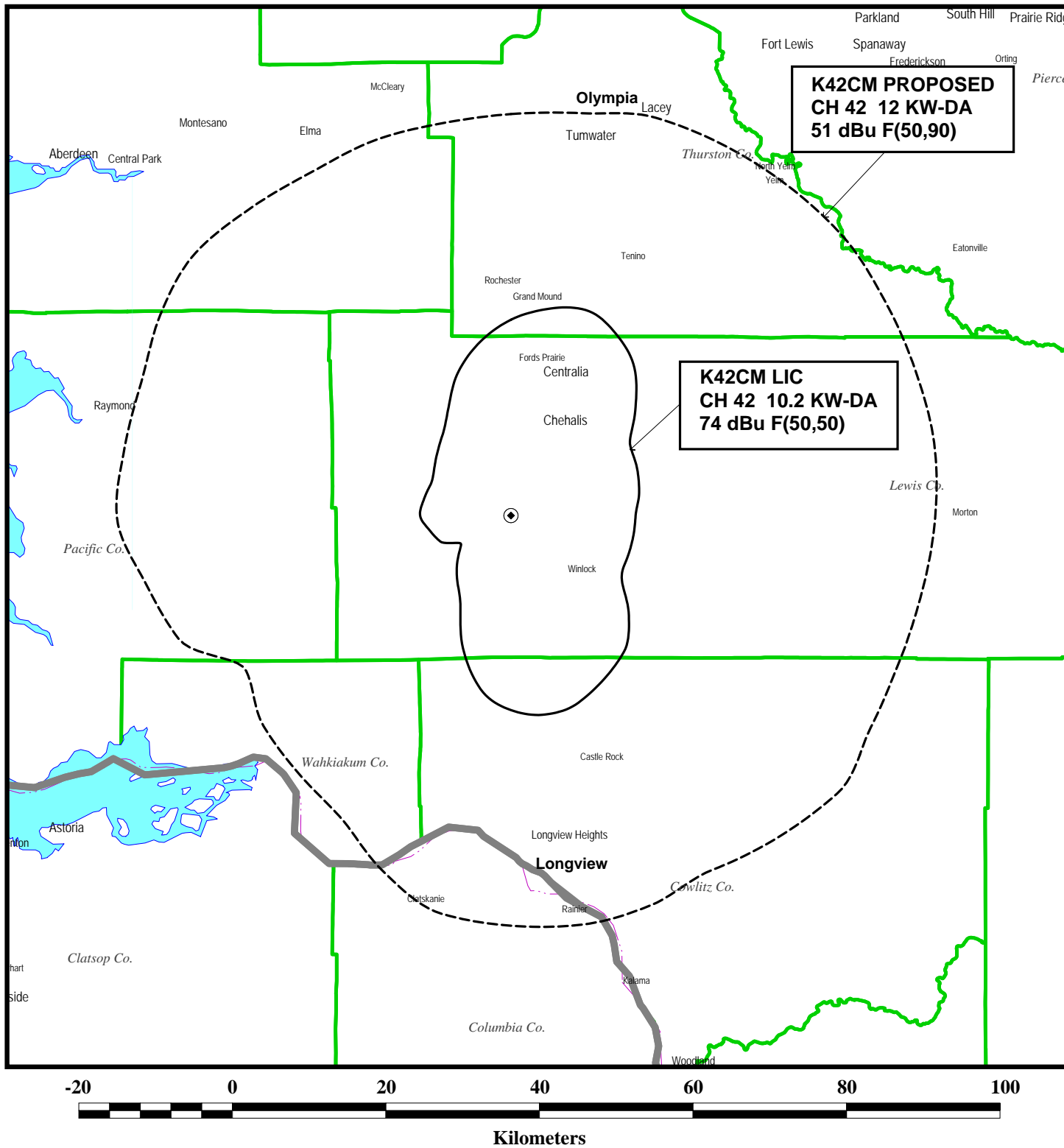


CANADA ALLOCATION

STATION K42CM
CENTRALIA, WASHINGTON

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

Figure 3



PREDICTED COVERAGE CONTOURS

**STATION K42CM
CENTRALIA, WASHINGTON**

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