

TECHNICAL EXHIBIT  
DISPLACEMENT RELIEF APPLICATION FOR  
CLASS A STATION KKEI-CA  
FACILITY ID 71078  
PORTLAND, OREGON  
CH 24 0.037 KW

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of a displacement relief application for Class A station KKEI-CA at Portland, Oregon (Facility ID: 71078). Specifically, this application proposes to modify the KKEI-CA licensed operation by specifying an analog operation on UHF channel 24 (530-536 MHz).

Displacement Relief Eligibility

Station KKEI-CA is currently licensed to operate on NTSC channel 38 (614-620 MHz) with a non-directional antenna maximum ERP of 150 kW and an antenna RCAMSL of 525 meters. However, co-channel DTV station KOMO-DT on channel 38 at Seattle, Washington, is located 236.4 kilometers from the KKEI-CA transmitter site, therefore KKEI-CA qualifies for displacement.

Class A station KKEI-CA proposes to displace to analog channel 24 from its licensed analog transmitter site and employ a COEL CO-8U/8 non-directional antenna. There is no proposed change in transmitter site.

This application is considered a "minor change" in facilities pursuant to Section 73.3572, as it is a displacement relief application and the proposed 74 dBu contour is encompassed by the licensed 74 dBu contour. Figure 1 is a map showing the proposed coverage.

Proposed Operation

Station KKEI-CA proposes to operate on analog channel 24 (530-536 MHz) with a COEL CO-8U/8 non-directional antenna, a maximum ERP of 0.037 kW and an RCAMSL of 525 meters. The COEL CO-8U/8 non-directional antenna will be mounted at the 183 meter level on an existing 282.2 meter tower. The FCC Tower Registration Number for the existing structure is 1204059.

Response to Paragraph 11

A study has been conducted for the proposed facility using the OET Bulletin 69 interference model.<sup>1</sup> The results indicate that the proposed operation will not create prohibited interference to stations in the Land Mobile Radio Service (LMRS) or other existing, authorized or proposed NTSC or DTV full-power, LPTV, TV translator or Class A stations.

Canadian Protection

The proposed channel 24 operation will be located 305.9 kilometers from the closest point of the US-Canadian common border. Therefore, consideration was given to the existing US-Canadian TV Agreement (1994). Pursuant to the existing Agreement, analog 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 for nonoffset stations. The pertinent interfering contour applicable towards co-channel DTV operations is the 24.7 dBu, F(50,10) contour. Figure 2 depicts the locations of both the 19 dBu, F(50,10) and 24.7 dBu, F(50,10) interfering contours based on the proposed channel 24 facilities. As indicated on Figure 2, neither the 19 dBu, F(50,10) nor the 24.7 dBu, F(50,10) contour overlaps Canadian land area. Therefore, it is not believed necessary to refer the proposal to Canada.

Response to Paragraph 12 - Environmental Protection Act

The proposed KKEI-CA facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation." The calculated power density at 2 meters above ground level at the base of the tower was calculated using the appropriate equation of the Bulletin. Using a worst case vertical relative field value of 1.0, a maximum ERP of 0.037 kilowatts, the calculated power density at 2 meters above ground level at the base of the tower is less than 0.0001 milliwatts per

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<sup>1</sup>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 and distance terrain increment of 1 km were 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.

square centimeter ( $\text{mW}/\text{cm}^2$ ), or less than 0.05% percent of the Commission's recommended limit of  $0.36 \text{ mW}/\text{cm}^2$  for TV channel 24 applicable to general population/uncontrolled exposure areas. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the new RF emission rules.

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.

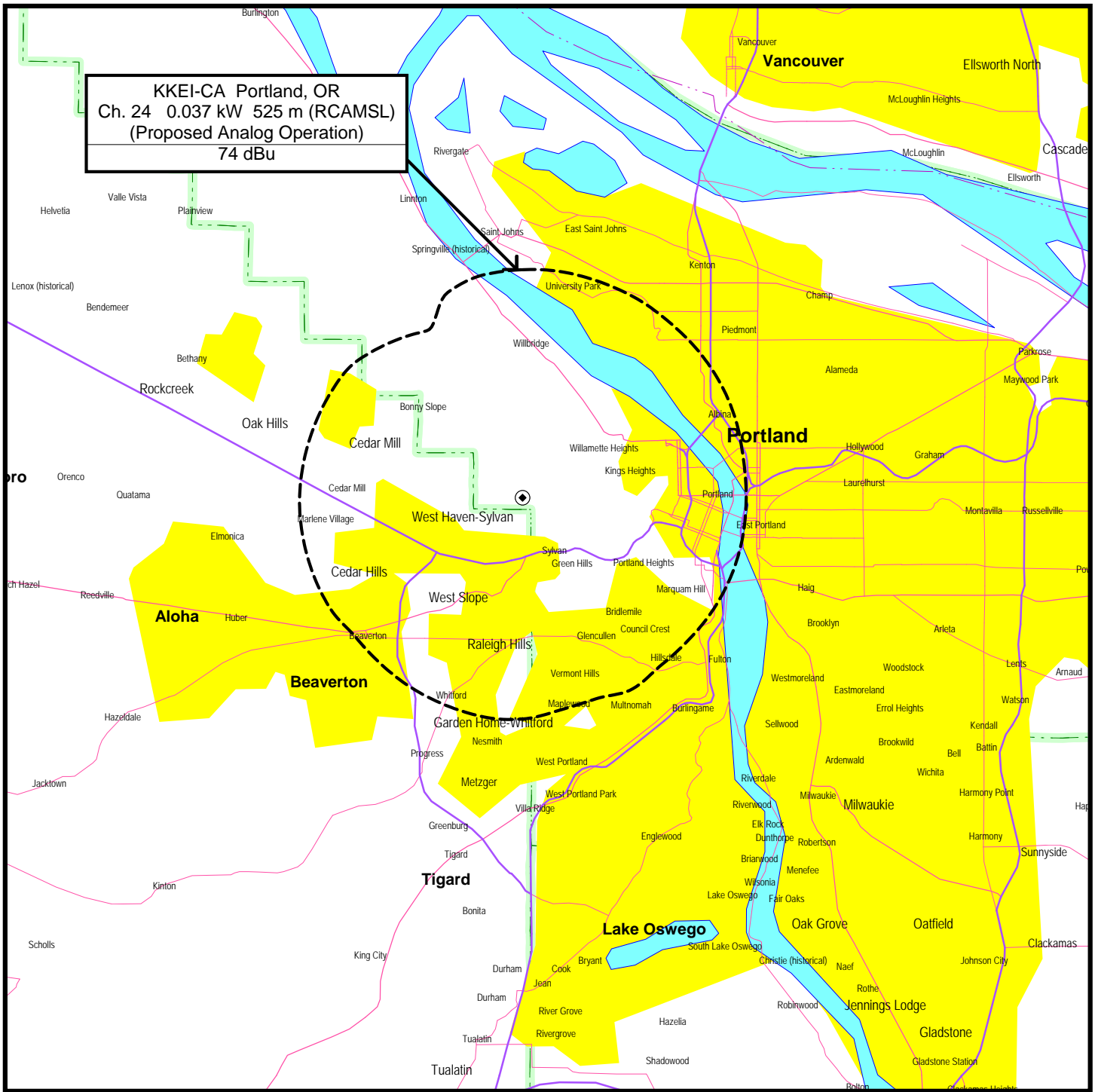
A handwritten signature in black ink, reading "Jerome J. Manarchuck". The signature is fluid and cursive, with the first name "Jerome" and last name "Manarchuck" clearly legible.

Jerome J. Manarchuck

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Figure 1



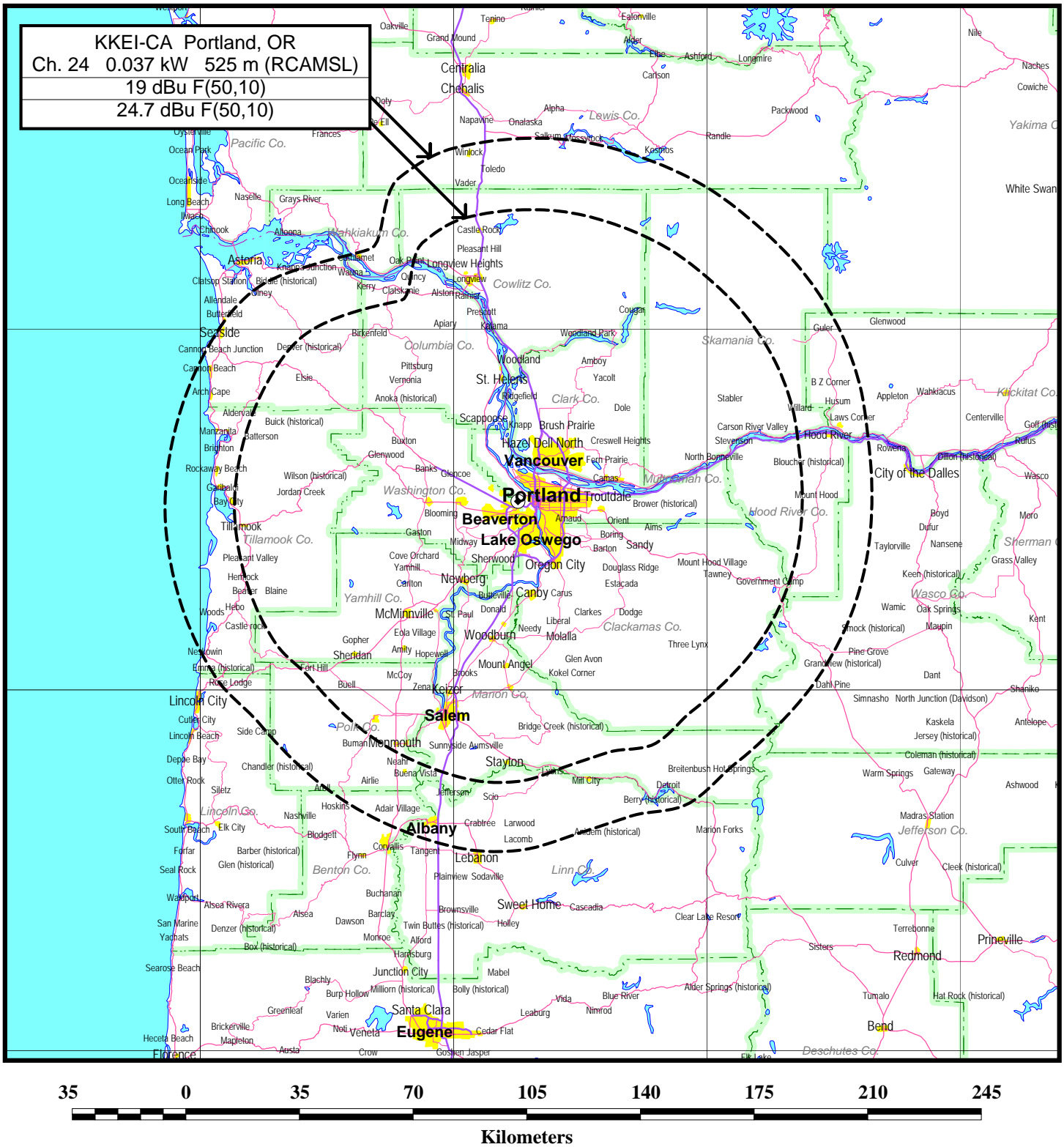
## FCC PREDICTED COVERAGE

CLASS A STATION KKEI-CA  
PORTLAND, OREGON

CH 24 0.037 KW 525 M (RCAMSL)

du Treil, Lundin & Rackley, Inc. Sarasota, Florida 34237

Figure 2



## CANADIAN ALLOCATION STUDY

CLASS A STATION KKEI-CA  
PORTLAND, OREGON  
CH 24 0.037 KW 525 M (RCAMSL)

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