

TECHNICAL EXHIBIT  
AMENDMENT TO  
APPLICATION FOR DTV CONSTRUCTION PERMIT  
FCC FILE NO. BPCDT-19980831KE  
FACILITY ID 48408  
STATION WPME-DT  
LEWISTON, MAINE  
CH 28        50 KW        241 M

Technical Narrative

This technical exhibit was prepared in support of an amendment to the pending application for construction permit for station WPME-DT on channel 28 at Lewiston, Maine (BPCDT-19980831KE). The instant amendment has been prepared in response to the FCC's letter of February 21, 2006 which indicates that the pending WPME-DT application cannot be granted based upon the second step contour overlap method in the Letter of Understanding (LOU) between the FCC and Industry Canada released September 29, 2000. Specifically, the FCC indicated that the WPME-DT application would cause additional realistic interference in excess of 2% to a co-channel Canadian DTV allotment in Coaticook, QU.<sup>1</sup> Therefore, WPME-DT proposes to amend its pending DTV maximization application in order to comply with the interference criteria contained in the LOU towards the Coaticook DTV channel 28 allotment as well as all other Canadian DTV and NTSC allotments, to comply with the domestic interference criteria and also with the FCC's current freeze on DTV modification applications which would result in an increase in a station's DTV service area.

By means of this instant amendment application, WPME-DT proposes to decrease the directional antenna maximum effective radiated power (ERP) from 215 kW to 50 kW, decrease the antenna height above average terrain from 251 meters to 241 meters and change antenna system. No other changes are proposed. The instant application is considered a minor change in facilities pursuant to Section 73.3572(a). Furthermore, as detailed below, the instant application is also acceptable for filing under the criteria set forth in the FCC TV/DTV freeze as there will be no increase in WPME-DT's

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<sup>1</sup> See letter dated February 21, 2006 from Clay Pendarvis, Associate Division Chief, Video Division, Media Bureau to HMW, Inc. (In Re: BPCDT-19980831KE, WPME-DT, Facility ID: 48408, Lewiston, ME, 1800E3-TN).

DTV service area in any direction as compared to the pending WPME-DT application (BPCDT-19980831KE).<sup>2</sup>

#### Proposed Facilities

It is proposed to operate WPME-DT from the existing WPME-TV site (NAD27 coordinates: 43-51-06 N, 70-19-40 W) on DTV channel 28 (554-560 MHz) with a directional antenna maximum ERP of 50 kW and an antenna HAAT of 241 meters. It is proposed to utilize a Dielectric model TLP-16B directional antenna which will be mounted at the 176 meter level on the existing tower structure, will incorporate an electrical beam tilt of 1 degree and will be oriented at 200 degrees true. The proposed antenna radiation center height above mean sea level will be 318 meters (FCC Tower registration 1022678).

#### Antenna Data

Figure 1 provides graphs of the horizontal and vertical plane relative field patterns for the proposed Dielectric model TLP-16B, horizontally polarized, directional antenna system.

#### Compliance with TV Freeze Order

Figure 2 is a map which depicts the location of the predicted 41 dBu, F(50,90) contours for the pending WPME-DT application (BPCDT-19980831KE) and the herein proposed WPME-DT DTV channel 28 operation. As indicated, the 41 dBu contour for the herein proposed operation is entirely within the 41 dBu contour for the pending application. Therefore, it is believed that the instant amendment application is acceptable for filing under the criteria set forth in the FCC TV/DTV freeze as there will be no increase in WPME-DT's DTV channel 28 service area, based on the pending application facilities, in any direction.

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<sup>2</sup> See FCC Public Notice dated August 3, 2004 entitled "Freeze on the Filing of Certain TV and DTV Requests for Allotment or Service Area Changes" (DA 04-2446).

### City Coverage

Figure 2 also depicts the predicted 48 dBu, F(50,90) coverage contour for the herein proposed WPME-DT channel 28 operation. As indicated, Lewiston is located within the 48 dBu contour. The Lewiston city limits were derived from information contained in the 2000 U.S. Census for Maine.

The distances to the predicted 41 dBu and 48 dBu, F(50,90) coverage contours were determined in accordance with the provisions of Section 73.625. The average elevations from 3.2 to 16.1 kilometers from the transmitter site, were obtained from the NGDC 30-second terrain database and were used for determining the distances to coverage contours.

### Domestic NTSC/DTV Allocation Considerations

Figure 3 is the separation study for DTV channel 28 from the proposed WPME-DT site. The study has been used to determine the domestic assignments requiring interference studies using the procedures outlined in the FCC's OET-69 bulletin. An interference analysis has been conducted using the procedures outlined in the FCC's OET-69 bulletin which demonstrates that the proposal complies with the interference protection provisions of Section 73.623(c)(2).<sup>3</sup>

### Class A Allocation Considerations

A study has been conducted which indicates that the WPME-DT proposal will not create prohibited interference to other existing, authorized or proposed Class A stations.

### US-Canadian LOU Compliance

The proposed transmitter site is located 159.5 kilometers from the closest point of the US/Canadian border. Hence, coordination of the proposed WPME-DT operation on

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<sup>3</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 2 km was employed. A Alpha 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.

channel 28 with Canada is a possible consideration. The proposed WPME-DT facilities are considered to be Class C for Canadian coordination purposes. As indicated on Figure 3, the proposed WPME-DT Class C operation as proposed herein does not comply with the separation requirements contained in the LOU with respect to co-channel DTV channel 28 allotments at Coaticook, QU and Cowansville, QU.

However, it is believed that the proposed WPME-DT operation complies with the contour overlap provisions of the LOU with respect to the Coaticook and Cowansville DTV channel 28 allotments. Based on the LOU, the pertinent interfering contour applicable to co-channel DTV stations is the 12.4 dBu, F(50,10) contour.<sup>4</sup> Figure 4A is a map which depicts the 12.4 dBu, F(50,10) contour for WPME-DT's allotted DTV facilities (ERP 50 kW/HAAT 258 meters, DA) which have been approved by Canada. Figure 4A also depicts the interfering 12.4 dBu contour for the herein proposed WPME-DT facilities. Figure 4B is an expanded scale version of Figure 4A which depicts detail along with US-Canadian border area. As indicated on Figures 4A and 4B, the herein proposed facilities will reduce the extent of the 12.4 dBu interfering contour towards those portions of the US-Canadian border area where overlap of the allotted 12.4 dBu contour occurs. In other words, the 12.4 dBu contour for the herein proposed WPME-DT operation is less extensive towards those portions of the US-Canadian border where the allotted 12.4 dBu contour currently overlaps. Therefore, it is believed that the herein proposed WPME-DT operation complies with the contour overlap provisions of the LOU with respect to the Coaticook and Cowansville DTV channel 28 allotments.

#### Objectionable Interference

There are no AM stations located within 10 kilometers (6.2 miles) of the proposed transmitter site. Figure 5 provides a tabulation of all known authorized full

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<sup>4</sup> Pursuant to Table 3 of Appendix 2 of the LOU, the F(50,10) interfering contour is determined by subtracting 19.5 dB (D/U) from the minimum required field strength of 39 dBu and then subtracting an additional 7.1 dB to adjust for the difference between the F(10,10) and F(50,10) values [12.4=(39-19.5)-7.1]

service FM and TV stations within 16 kilometers of the proposed WPME-DT site. Although no adverse electromagnetic impact is expected, the applicant recognizes its responsibility to correct problems, which are a result of its proposed operation.

The proposed site is more than 2915 kilometers from the closest point of the Mexican border. The closest FCC monitoring station is at Belfast, ME located 119 kilometers to the northeast. The National Radio Quiet Zone (VA/WV) is 850 kilometers to the southwest. The Table Mountain Radio Quiet Zone (CO) is more than 2890 kilometers to the west. The closest radio astronomy site conducting research on TV channel 37 is at Hancock, NH located 168 kilometers to the southwest. All these separations are considered sufficient to avoid interference from the proposed operation.

#### Environmental Protection Act

The proposed facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna is located 176 meters above ground level. The maximum DTV ERP is 50 kW (horizontal polarization). A "worst-case" vertical plane relative field value of 0.2 (for angles below 60 degrees downward) is assumed for the antenna's downward radiation (see Figure 1, Sheet 2). The calculated power density at a point 2 meters above ground level is 0.0022 mW/cm<sup>2</sup>. This is 0.6% of the FCC's recommended limit of 0.37 mW/cm<sup>2</sup> for channel 28 for an "uncontrolled" environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect with the other stations 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.

Finally, it is noted that this technical exhibit only addresses the potential for radio frequency 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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March 20, 2006



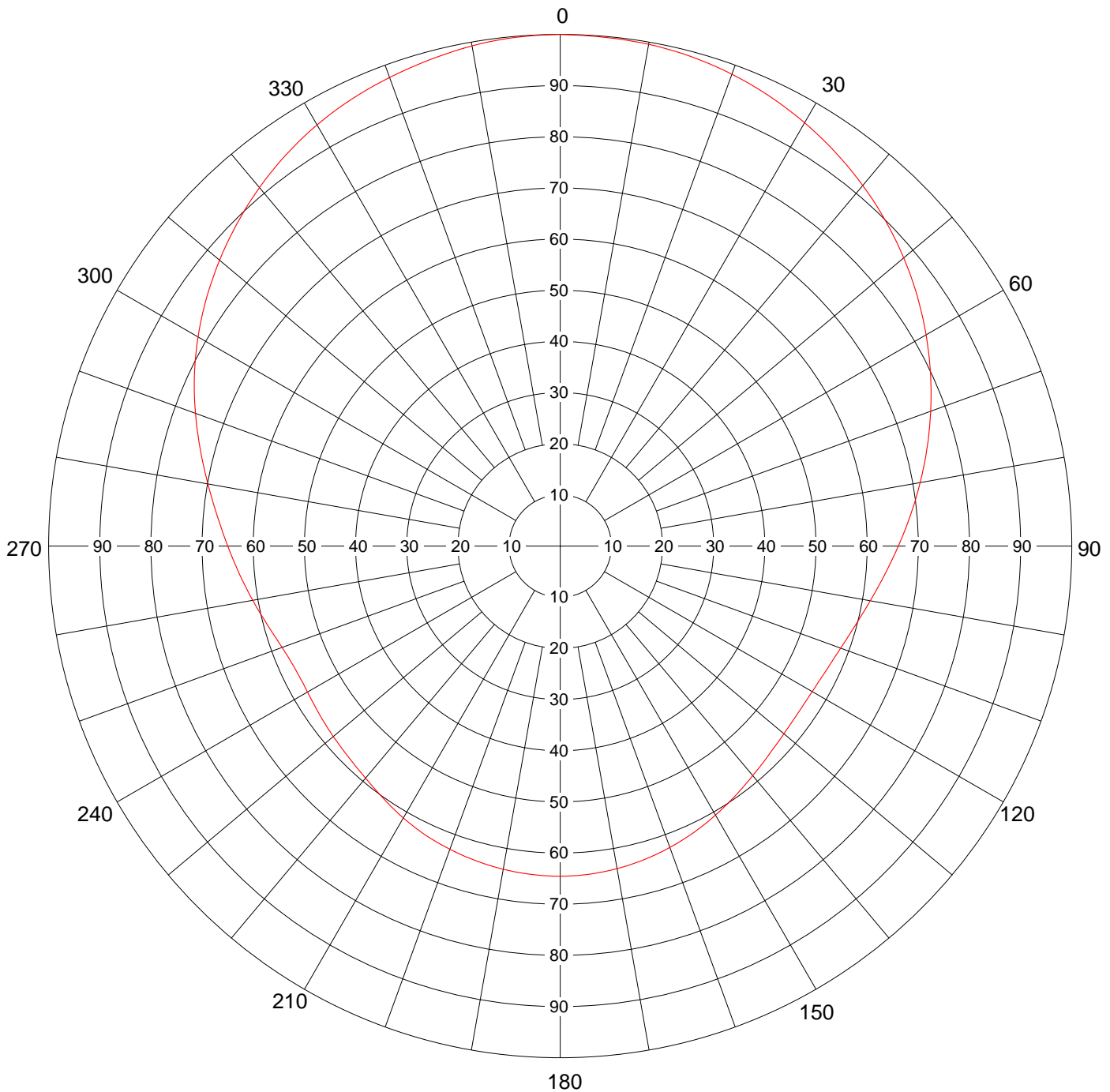
Date	20 Mar 2006	Channel	28
Call Letters	WPME-DT		
Location	Lewiston, ME		
Customer			
Antenna Type	TLP-16B		

### AZIMUTH PATTERN

Gain  
Calculated / Measured

**1.70 (2.30 dB)**  
**Calculated**  
(200°T)

Frequency **557 MHz**  
Drawing # **TLP-B**



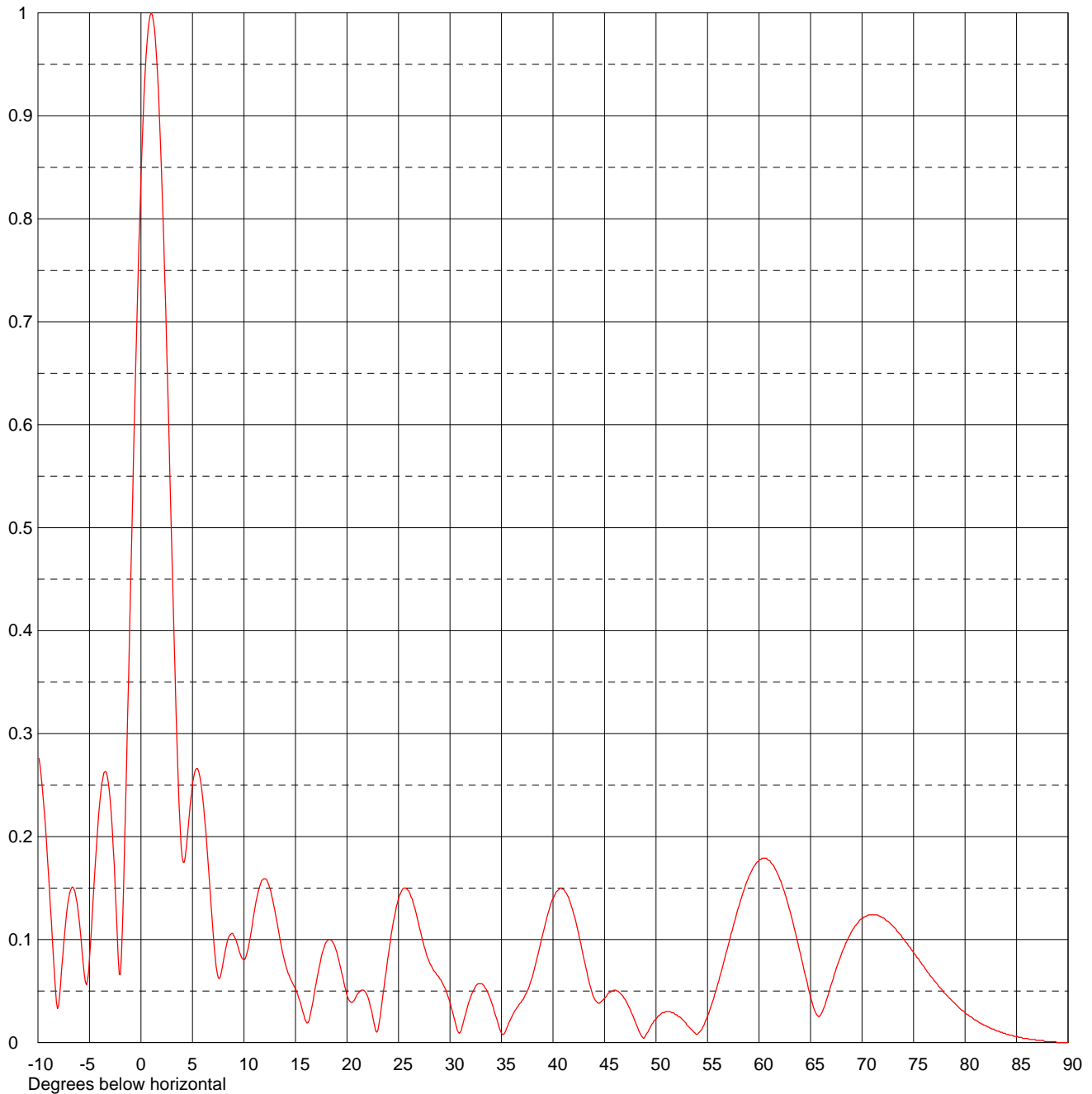
Remarks:



Date	20 Mar 2006	
Call Letters	WPME-DT	Channel 28
Location	Lewiston, ME	
Customer		
Antenna Type	TLP-16B	

### ELEVATION PATTERN

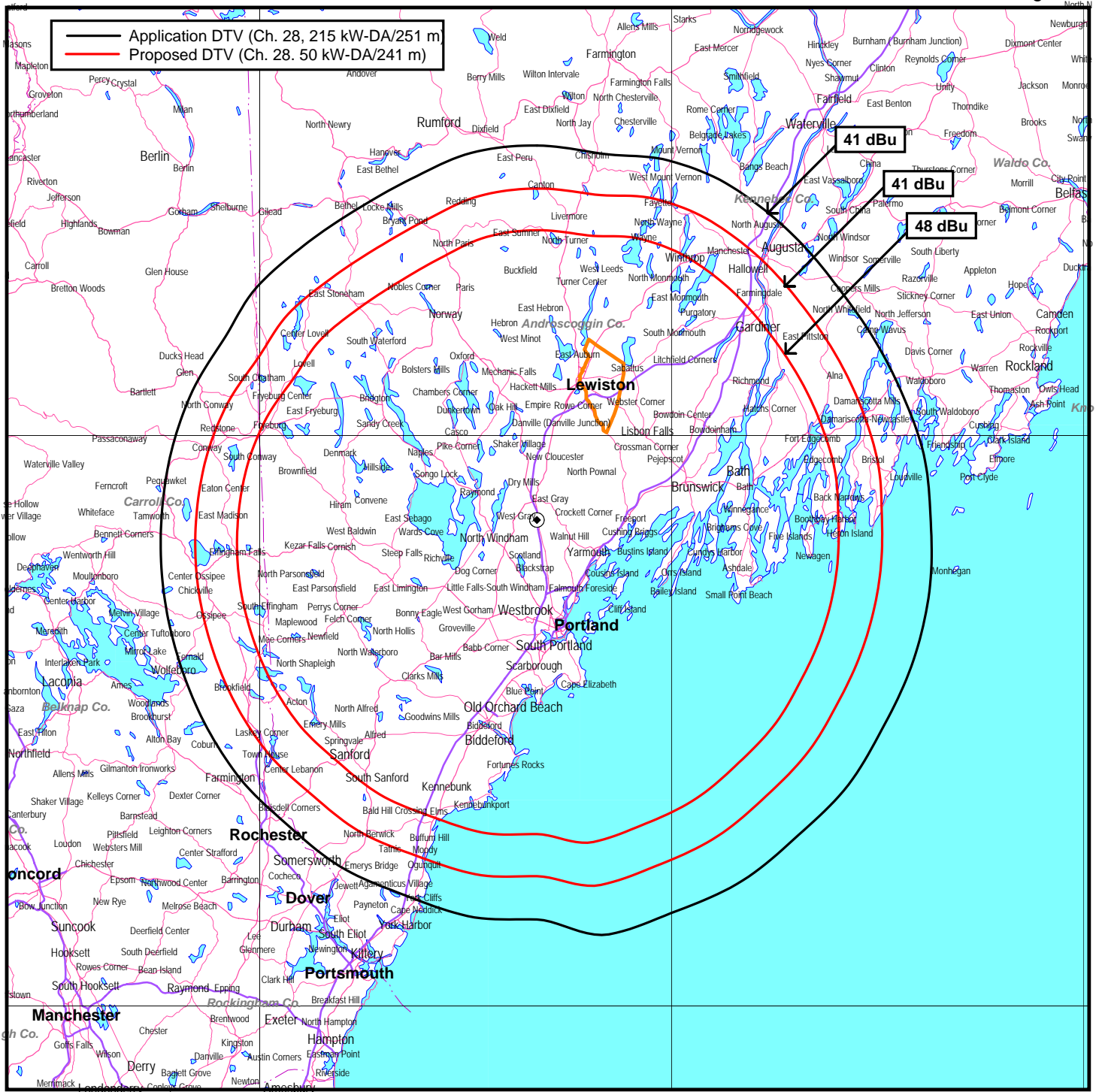
RMS Gain at Main Lobe	16.0 (12.04 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	11.3 (10.53 dB)	Frequency	557.00 MHz
Calculated / Measured	Calculated	Drawing #	16L160100-90



Remarks:



Figure 2



## PREDICTED FCC CONTOURS

DTV STATION WPME-DT  
LEWISTON, MAINE

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

CDBS TV/DTV SEPARATION STUDY

Job Title: Proposed WPME-DT, Lewiston, ME

Channel: 28

Class: B

Type: DT

Separation Buffer: 50 km

Coordinates: 43-51-06 070-19-40

Zone: I

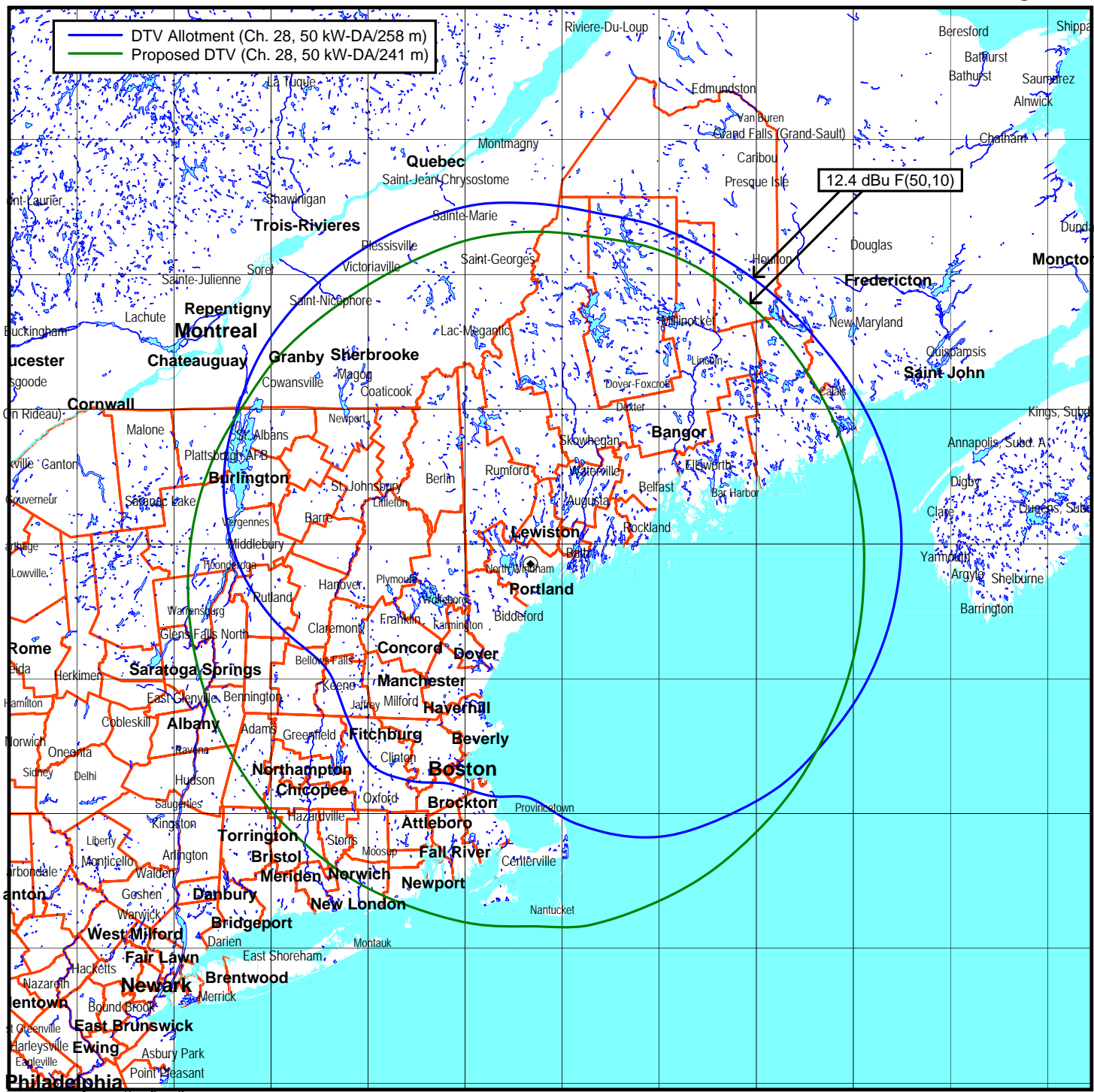
Call Id	City St	File Status	Channel Num	ERP Zone	HAAT	DA Id	Latitude Longitude	Bear	Dist. (km)	Req. min	max
WPXG 48406	CONCORD NH	LIC C	BLCT 20030926AO	21(+) I	2300.000 344	D 42933	43-11-04 071-19-12	227.5	109.2 28.73	24.1 Clear	80.5
WMEA-TV 39656	BIDDEFORD ME	LIC C	BLET 20040414AB	26(-) I	133.000 230.7	D 44407	43-25-00 070-48-17	218.6	61.8 18.72	24.1 Short <sup>1</sup>	80.5
WPME 48408	LEWISTON ME	APP C	BPCDT 19980831KE	28( ) I	215.000 251	D 40224	43-51-06 070-19-40	90.0	0.0		
DWWLA	LEWISTON ME	DTV		28( ) I	50.000 258	D	43-51-06 070-19-40	90.1	0.0		
NEW-DT 163665	COATICOOK QU	APP C	BPFS 20041026AD	28(Z) II	0.200 100	N	45-08-00 071-48-00	321.2	184.4 111.62	296.0 Short <sup>2</sup>	296.0
	COATICOOK(6 QU	CAN		28( ) I	0.000 0		45-08-00 071-48-00	A 321.2	184.4 111.62	296.0 Short <sup>2</sup>	296.0
WVER 69946	RUTLAND VT	LIC C	BLET 19930715KJ	28(+) II	275.000 429		43-39-32 073-06-25	265.5	224.8 7.55	217.3 Close	217.3
WLWC 3978	NEW BEDFORD MA	LIC C	BMLCT 20031210AB	28(-) I	5000.000 220	D 18774	41-46-39 070-55-41	192.2	235.6 18.29	217.3 Clear	217.3
NEW-DT 163666	COWANSVILLE QU	APP C	BPFS 20041026AD	28(Z) II	0.200 100	N	45-12-00 072-45-00	308.8	244.0 52.02	296.0 Short <sup>2</sup>	296.0
	COWANSVILLE QU	CAN		28( ) I	0.000 0		45-12-00 072-45-00	A 308.8	244.0 52.02	296.0 Clear	296.0
WXCW-CA 2650	HARTFORD CT	CP C	BPTTA 20050609AA	28(Z) C	5.000 69832		42-15-05 072-38-43	227.4	259.3 42.04	0.0 Class A <sup>3</sup>	0.0
CBVT-4 163709	LAC-ETCHEMI QU	APP C	BPFS 20041027AA	28(Z) II	4.000 150	N	46-24-42 070-35-37	355.9	285.3 8.27	277.0 Close	277.0
WPME 48408	LEWISTON ME	LIC C	BLCT 19970813KG	35(-) I	1100.000 278	N 30292	43-51-06 070-19-39	90.0	0.0 24.08	24.1 Clear	80.5

<sup>1</sup> The proposed WPME-DT operation complies with the FCC's 2%/10% interference requirements using the procedures outlined in FCC OET-69 Bulletin. See Technical Narrative.

<sup>2</sup> It is believed that the proposed WPME-DT operation complies with the requirements of the Letter of Understanding (LOU) between the FCC and Industry Canada. See Technical Narrative and Figures 4A and 4B.

<sup>3</sup> The proposed WPME-DT operation complies with the FCC's 0.5% interference requirements applicable to Class A stations using the procedures outlined in FCC OET-69 Bulletin. See Technical Narrative.

Figure 4A

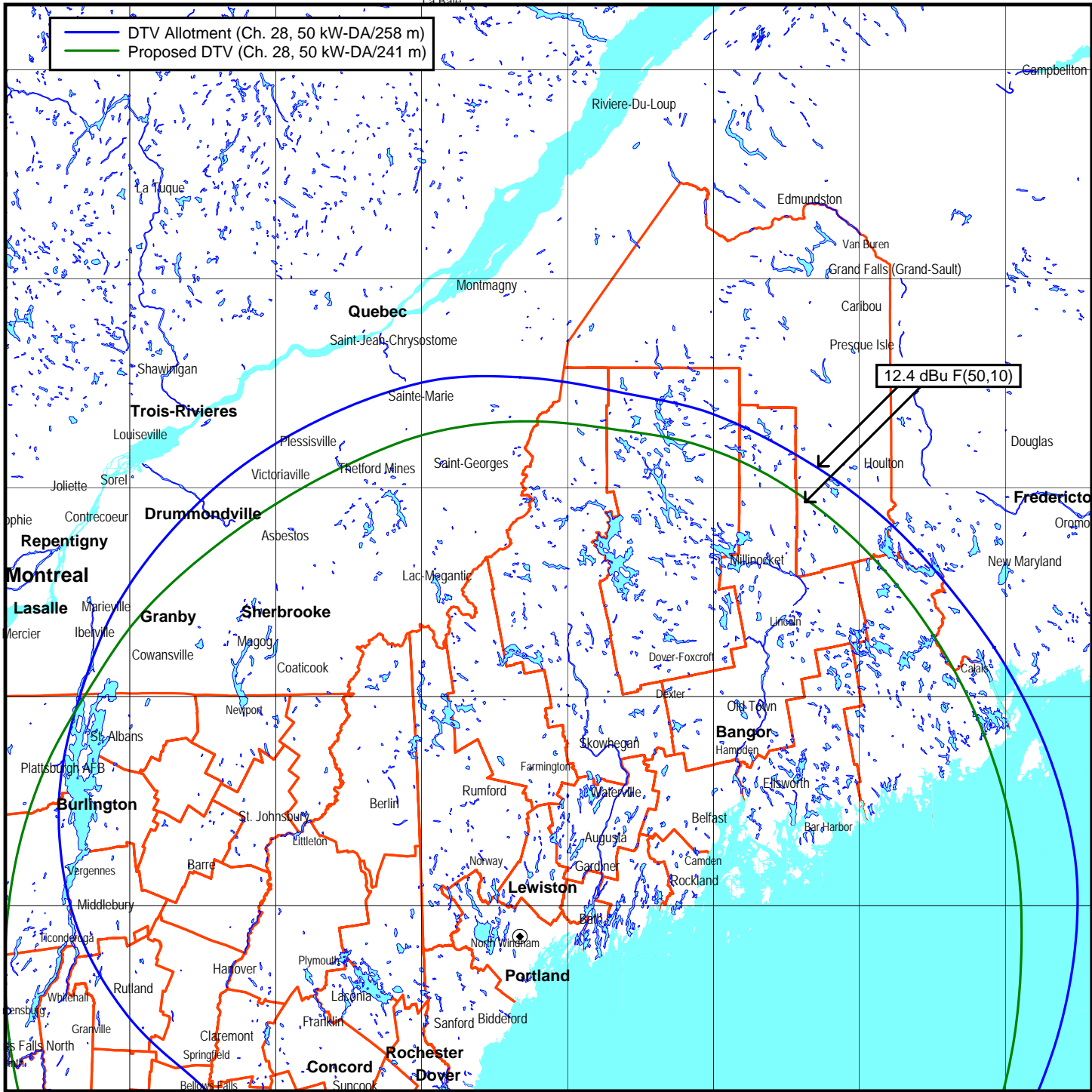


## CANADIAN ALLOCATION STUDY

STATION WPME-DT  
LEWISTON, MAINE

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

Figure 4B



## CANADIAN ALLOCATION STUDY

STATION WPME-DT  
LEWISTON, MAINE

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

**du Treil, Lundin, and Rackley**

**Proposed WPME-DT, Lewiston, ME**

**Coordinates: 43-51-06 070-19-40 Channel Range: -**

**Range: 16**

Date: 3/20/2006

**CDBS Tv Inquiry List**

Page: 1

<b>Rec Type</b>	<b>Facility Id</b>	<b>Call</b>	<b>Status</b>	<b>Chan</b>	<b>Svc Class</b>	<b>Class</b>	<b>City</b>	<b>St</b>	<b>DA</b>	<b>Latitude</b>	<b>Longitude</b>	<b>ERP (kW)</b>	<b>HAAT (m)</b>	<b>RCAMSL (m)</b>	<b>Bearing</b>	<b>Dist. (km)</b>
C	48408	WPME	APP	28	DT		LEWISTON	ME	D	43-51-06	070-19-40	215.000	251	328	0	0
C	53065	WPXT	LIC	51	TV		PORTLAND	ME	D	43-51-06	070-19-40	3020.00	280	359	0	0
C	53065	WPXT	CP	43	DT		PORTLAND	ME	N	43-51-06	070-19-40	750.000	265	342	0	0
C	48408	WPME	LIC	35	TV		LEWISTON	ME	N	43-51-06	070-19-39	1100.00	278	345	89.99	0.02
C	25683	WGME-T	APP	38	DT		PORTLAND	ME	D	43-55-28	070-29-28	1000.00	465	581	301.7	15.42
C	25683	WGME-T	CP	38	DT		PORTLAND	ME	D	43-55-28	070-29-28	1000.00	491	607	301.7	15.42
C	25683	WGME-T	LIC	13	TV		PORTLAND	ME	N	43-55-29	070-29-29	295.000	462	606	301.8	15.45

**du Treil, Lundin, and Rackley**

**Proposed WPME-DT, Lewiston, ME**

**Coordinates: 43-51-06**

**070-19-40**

**Frequency Range: -**

**Range: 16**

Date: 3/20/2006

**CDBS FM Inquiry List**

Page: 1

<b>Rec Type</b>	<b>Fac Id</b>	<b>Call</b>	<b>Status</b>	<b>Chan</b>	<b>Svc Class</b>	<b>Class</b>	<b>City</b>	<b>St</b>	<b>DA</b>	<b>Latitude</b>	<b>Longitude</b>	<b>ERP (kW)</b>	<b>HAAT (m)</b>	<b>RCAMSL (m)</b>	<b>Bear</b>	<b>Dist. (km)</b>
C	3134	WJBQ	LIC	250	FM	B	PORTLAND	ME		43-51-06	070-19-40	16.000	271.0	351.0	0.0	0.0
C	59534	WHXR	LIC	294	FM	A	NORTH	ME	D	43-51-06	070-19-40	0.810	190.0	268.0	0.0	0.0
C	17483	WMSJ	LIC	207	FM	B1	FREEPORT	ME	N	43-45-45	070-19-30	7.500			178.7	9.9
C	49982	WPOR	LIC	270	FM	B	PORTLAND	ME	N	43-45-45	070-19-30	33.000	184.0	236.0	178.7	9.9
C	24949	WTHT	LIC	260	FM	B	AUBURN	ME	N	43-57-07	070-17-46	28.500	196.0	288.0	12.8	11.4
C	68282	WSJB-F	LIC	218	FM	A	STANDISH	ME		43-49-32	070-29-03	0.360	26.0	129.0	257.0	12.9
C	22878	WBLM	LIC	275	FM	C	PORTLAND	ME	N	43-55-29	070-29-29	100.000	435.0	551.0	301.8	15.5