

TECHNICAL EXHIBIT
APPLICATION FOR DTV CONSTRUCTION PERMIT
STATION WPXT-DT
PORTLAND, MAINE

MAY 11, 2004

CH 41 750 KW 265 M

TECHNICAL EXHIBIT
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PORTLAND, MAINE
CH 43 750 KW 265 M

Technical Narrative

This Technical Exhibit supports a "check list" application for television (TV) station WPXT on NTSC (analog) channel 51 at Portland, Maine. This application requests a construction permit (CP) for a digital television (DTV) operation on channel 43 at Portland, Maine. In MM Docket No.00-133, RM-9895, the FCC allotted channel 43 for WPXT-DT's DTV operation in place of channel 4. The FCC assigned a non-directional ERP of 750 kilowatts (kW) and an antenna radiation center height above average terrain (HAAT) of 265 meters for the DTV allotment.

Station WPXT-DT proposes to operate DTV channel 43 at its allotted DTV site (43-51-06 N, 70-19-40 W). It is proposed to operate with an Andrew ATW30H3-HSO-43H non-directional antenna with an ERP of 750 kilowatts and an HAAT of 265 meters. Since these facilities are the same as those proposed in the WPXT-DT Rulemaking Petition, this application is considered a "checklist application".

The FCC antenna registration number for the existing tower is 1022679. Figure 1 is the vertical pattern for the proposed Andrew ATW30H3-HSO-43H antenna.

There are no known authorized full service AM stations within 5 kilometers (3 miles) of the WPXT-DT transmitter site. Figure 2 is a tabulation of full service FM and TV stations within 16 kilometers(10 miles) of the WPXT-DT site. Although no adverse electromagnetic impact is expected, the applicant recognizes its responsibility to

correct problems that result from its proposed DTV operation.

The WPXT-DT transmitter site is approximately 160 kilometers from the closest point of the Canadian border. The site is more than 2,900 kilometers from the closest point of the Mexican border. The closest FCC monitoring station is at Belfast, Maine, approximately 119 kilometers to the northeast. The closest point of the National Radio Quiet Zone (VA/WV) is 850 kilometers to the southeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is approximately 2890 kilometers to the west. The closest radio astronomy site operating on TV channel 37 is at Hancock, New Hampshire, approximately 168 kilometers to the southeast. Except for the distance to the Canadian border area, these separations are sufficient to not be a concern for coordination purposes. However, the proposed facilities are the same as those already approved by the Canadian government. Therefore, it is believed coordination will not be necessary.¹

Figure 3 is a map showing the FCC predicted coverage contours for WPXT-DT. The map provides the predicted 41 dBu f(50,90) noise limited contour and also the 48 dBu f(50,90) city grade contour. The extent of the contours have been calculated using the normal FCC prediction method. The Portland city limits were derived from information contained in the 2000 U.S. Census for Maine.

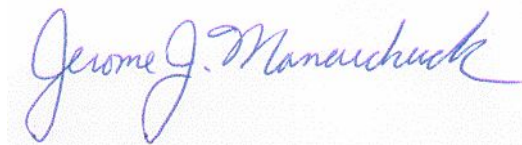
The proposed WPXT-DT DTV facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the WPXT-DT DTV antenna is located 196

¹ If it is determined that coordination is necessary, it is respectfully requested that the proposal be forwarded to Canada.

meters above ground level. The maximum DTV ERP is 750 kW. A conservative vertical relative field value of 0.1 is presumed for the antenna's downward radiation (see Sheet 1 of Figure 1). The calculated power density at two meters above ground level is 0.0067 mW/cm^2 . This is 1.6% of the FCC's recommended limit of 0.43 mW/cm^2 for channel 43 for an "uncontrolled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is a multi-user site, an agreement will control access to the site. 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.

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 provided to the FCC by the tower owner as part of the tower registration process.



Jerome J. Manarchuck

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
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May 11, 2004

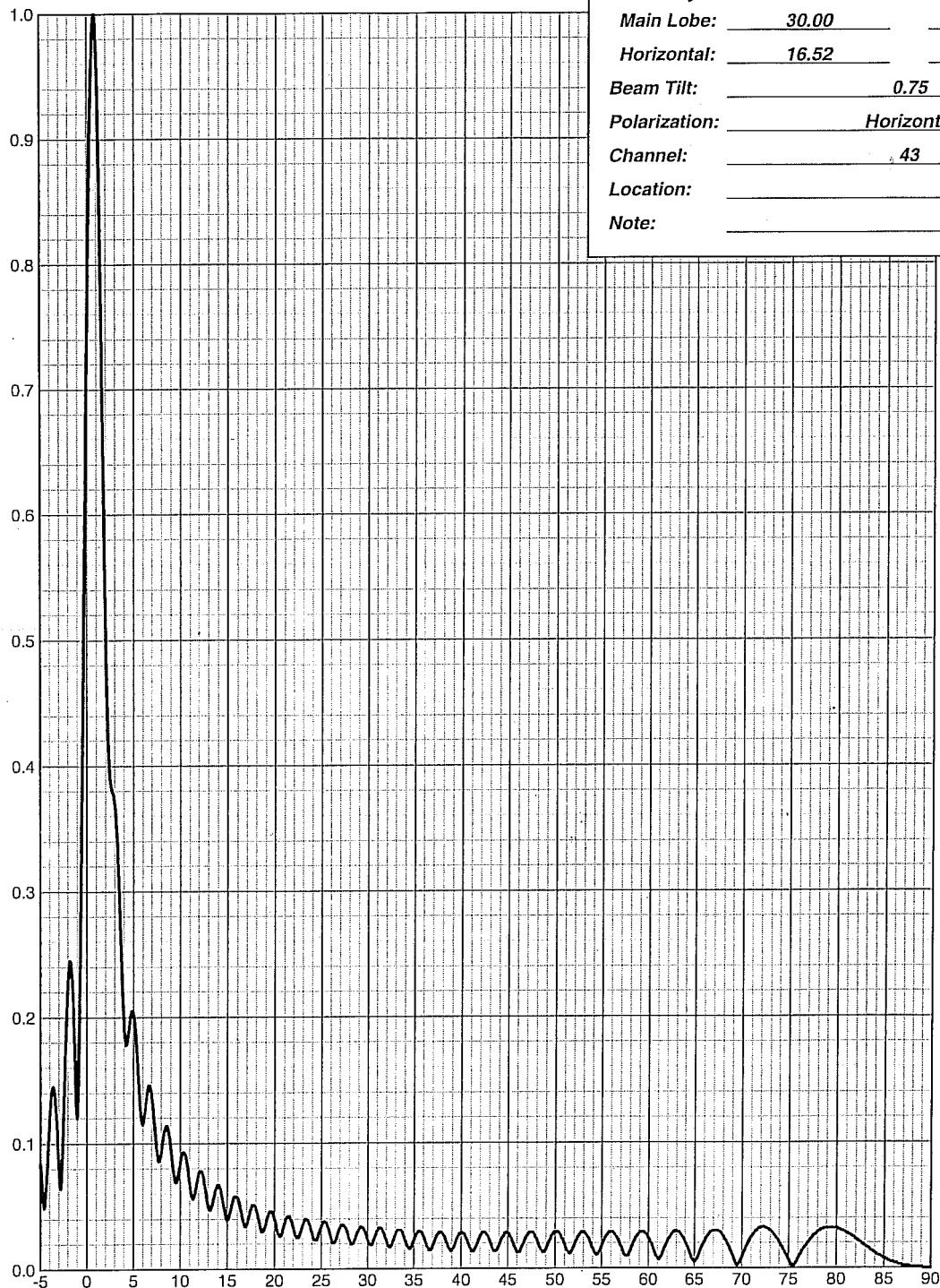


ANDREW®

ELEVATION PATTERN

Type:	ATW30H3H	
Directivity:	Numeric	dBd
Main Lobe:	30.00	14.77
Horizontal:	16.52	12.18
Beam Tilt:	0.75	
Polarization:	Horizontal	
Channel:	43	
Location:		
Note:		

Relative Field



ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A 60462

**ANDREW®****ELEVATION TABULATED DATA**Type: ATW30H3HPolarization: Horizontal

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-5.00	0.084	-21.51	6.50	0.140	-17.08	42.00	0.026	-31.70	88.00	0.001	-60.00
-4.75	0.059	-24.66	6.75	0.146	-16.74	43.00	0.023	-32.77	89.00	0.001	-60.00
-4.50	0.052	-25.68	7.00	0.137	-17.27	44.00	0.018	-34.89	90.00	0.000	0.00
-4.25	0.082	-21.67	7.25	0.118	-18.60	45.00	0.028	-31.06			
-4.00	0.119	-18.49	7.50	0.096	-20.35	46.00	0.013	-37.72			
-3.75	0.142	-16.98	7.75	0.086	-21.31	47.00	0.026	-31.70			
-3.50	0.143	-16.89	8.00	0.092	-20.72	48.00	0.024	-32.40			
-3.25	0.120	-18.45	8.25	0.106	-19.53	49.00	0.015	-36.48			
-3.00	0.081	-21.83	8.50	0.113	-18.94	50.00	0.029	-30.75			
-2.75	0.069	-23.29	8.75	0.110	-19.17	51.00	0.019	-34.42			
-2.50	0.116	-18.71	9.00	0.097	-20.26	52.00	0.018	-34.89			
-2.25	0.180	-14.89	9.25	0.080	-21.94	53.00	0.029	-30.75			
-2.00	0.229	-12.80	9.50	0.069	-23.22	54.00	0.016	-35.92			
-1.75	0.245	-12.23	9.75	0.073	-22.73	55.00	0.018	-34.89			
-1.50	0.221	-13.11	10.00	0.084	-21.51	56.00	0.029	-30.75			
-1.25	0.161	-15.84	11.00	0.069	-23.22	57.00	0.018	-34.89			
-1.00	0.120	-18.42	12.00	0.076	-22.38	58.00	0.013	-37.72			
-0.75	0.218	-13.25	13.00	0.050	-26.02	59.00	0.028	-31.06			
-0.50	0.385	-8.29	14.00	0.067	-23.48	60.00	0.024	-32.40			
-0.25	0.570	-4.89	15.00	0.039	-28.18	61.00	0.008	-41.94			
0.00	0.742	-2.59	16.00	0.057	-24.88	62.00	0.021	-33.56			
0.25	0.880	-1.12	17.00	0.036	-28.87	63.00	0.030	-30.46			
0.50	0.970	-0.26	18.00	0.048	-26.38	64.00	0.021	-33.56			
0.75	1.000	0.00	19.00	0.035	-29.12	65.00	0.005	-46.02			
1.00	0.972	-0.25	20.00	0.040	-27.96	66.00	0.021	-33.56			
1.25	0.891	-1.01	21.00	0.035	-29.12	67.00	0.030	-30.46			
1.50	0.772	-2.25	22.00	0.033	-29.63	68.00	0.026	-31.70			
1.75	0.638	-3.91	23.00	0.035	-29.12	69.00	0.011	-39.17			
2.00	0.514	-5.78	24.00	0.029	-30.75	70.00	0.009	-40.92			
2.25	0.429	-7.36	25.00	0.034	-29.37	71.00	0.025	-32.04			
2.50	0.389	-8.20	26.00	0.026	-31.70	72.00	0.032	-29.90			
2.75	0.379	-8.43	27.00	0.033	-29.63	73.00	0.030	-30.46			
3.00	0.369	-8.66	28.00	0.024	-32.40	74.00	0.021	-33.56			
3.25	0.341	-9.36	29.00	0.031	-30.17	75.00	0.007	-43.10			
3.50	0.293	-10.66	30.00	0.023	-32.77	76.00	0.008	-41.94			
3.75	0.237	-12.51	31.00	0.030	-30.46	77.00	0.020	-33.98			
4.00	0.192	-14.33	32.00	0.023	-32.77	78.00	0.029	-30.75			
4.25	0.179	-14.97	33.00	0.027	-31.37	79.00	0.032	-29.90			
4.50	0.189	-14.47	34.00	0.024	-32.40	80.00	0.032	-29.90			
4.75	0.203	-13.85	35.00	0.023	-32.77	81.00	0.028	-31.06			
5.00	0.203	-13.85	36.00	0.026	-31.70	82.00	0.023	-32.77			
5.25	0.185	-14.66	37.00	0.018	-34.89	83.00	0.018	-34.89			
5.50	0.155	-16.19	38.00	0.028	-31.06	84.00	0.012	-38.42			
5.75	0.126	-18.03	39.00	0.015	-36.48	85.00	0.008	-41.94			
6.00	0.115	-18.79	40.00	0.029	-30.75	86.00	0.005	-46.02			
6.25	0.125	-18.06	41.00	0.016	-35.92	87.00	0.002	-53.98			



ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A 60462

FM Stations Within 16 kilometers

Coordinates: N 43-51-06 W 70-19-40

Frequency Range: 200-300

Range: 16 km

Date: 5/11/2004

CDBS FM Inquiry List

Page: 1

Rec Type	Fac Id	Call	Status	Chan	Svc Class	Class	City	St	DA	Latitude	Longitude	ERP (kW)	HAAT (m)	RCAMSL (m)	Bear	Dist. (km)
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	49982	WPOR	CP	270	FM	B	PORTLAND	ME	N	43-45-33	070-19-15	32.000	185.0	233.0	176.9	10.3
C	24949	WTHH	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

TV Stations within 16 kilometers

Coordinates: N 43-51-06 W 70-19-40

Channel Range: 2-69

Range: 16 km

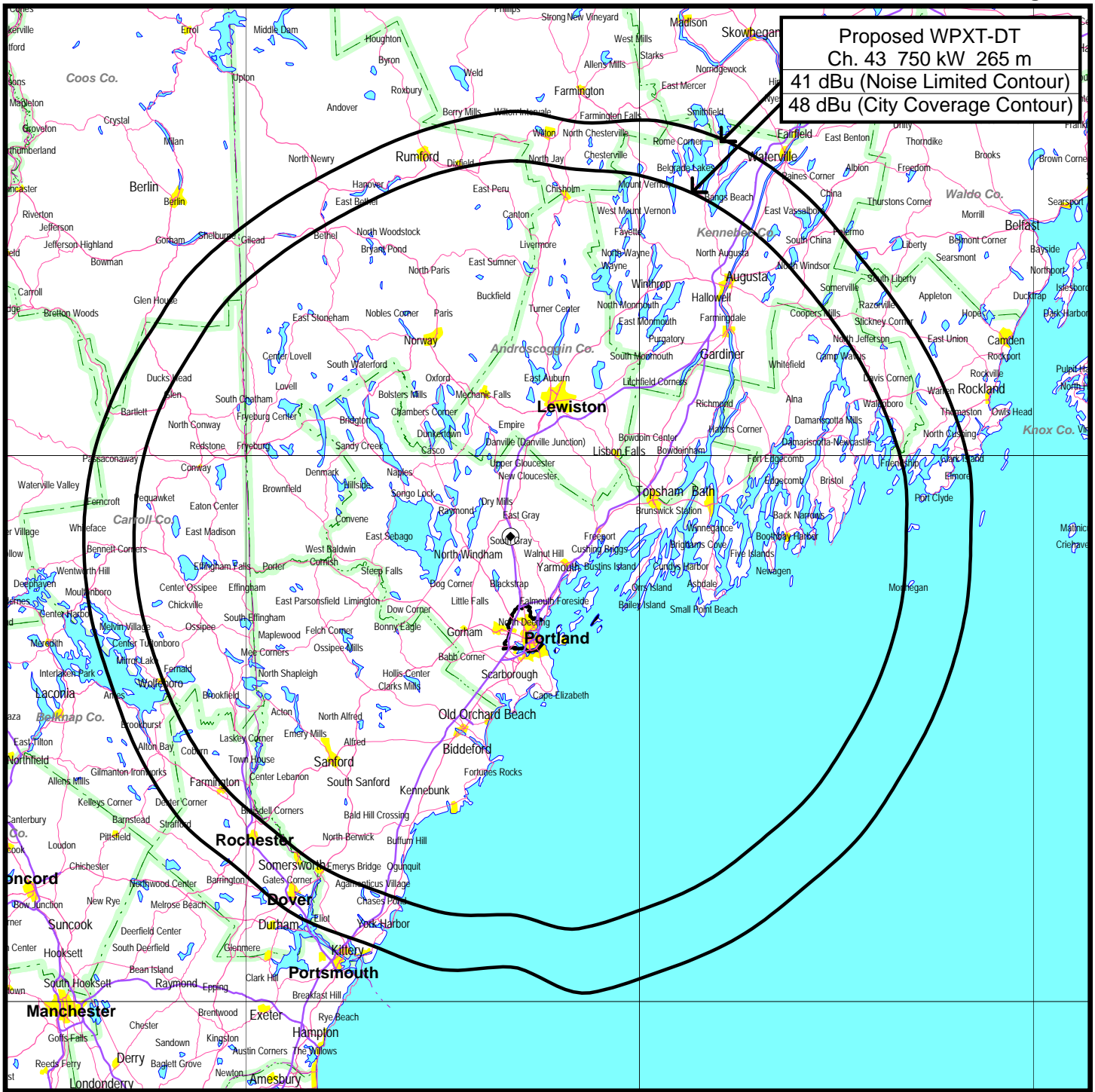
Date: 5/10/2004

CDBS Tv Inquiry List

Page: 1

Rec Type	Facility Id	Call	Status	Chan	Svc Class	Class	City	St	DA	Latitude	Longitude	ERP (kW)	HAAT (m)	RCAMSL (m)	Bearing	Dist. (km)
C	53065	WPXT	CP	4	DT		PORTLAND	ME	D	43-51-06	070-19-40	10.000	265	342	0	0
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	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	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

Figure 3



PREDICTED COVERAGE CONTOURS

STATION WPXT-DT
PORTLAND, MAINE
CH 43 750 KW 265 M

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