

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of D.T.V. LLC, licensee of Low Power Television Station WRAP-LP, Channel 32 in Cleveland, Ohio, and permittee of a digital flashcut authorization, in support of its minor-change application for modification of Construction Permit LMS-0000001539, to specify a new site. The new site is located 47 kilometers from the site of the digital authorization.

It is proposed to mount an 8-bay slotted-cylinder horizontally-polarized omnidirectional antenna at the 70-meter level of an existing 80.5-meter communications tower. The proposed effective radiated power is 15.0 kW in the horizontal plane, which is the authorized power level of digital WRAP-LD. Exhibit B is a map upon which the predicted 51 dBu service contour is plotted. Exhibit C is an elevation pattern for the proposed ERI AL8 antenna.

Attached, as Exhibit D, is a summary report from a TVStudy interference analysis for the proposed facility. Our study employed a cell size of 1.0 kilometer and an increment spacing of 1.0 kilometer. Further the applicant proposes use of a full-service mask filter. The results indicate that the proposed WRAP-LD facility meets the Commission's interference requirements to all full-power and low-power co-channel and adjacent-channel television facilities, except for one. As shown, the proposed WRAP-LD facility causes approximately 19% interference to the service population of the proposed operation of WYFX-LD.

WYFX-LD presently operates on Channel 19 in Youngstown, Ohio. During the recent LPTV displacement window, the owner of this station filed a displacement application, specifying Channel 32 in LMS-0000053007. That application causes significant predicted

EXHIBIT A

interference to the authorized digital facilities of WRAP-LD. In its FCC filing, the owner of WYFX-LD agrees that its filing violates the FCC's interference limits to WRAP-LP's authorized facilities. Accordingly, the WYFX-LD application must be dismissed by the Commission* and for the purposes of the instant application, interference to the WYFX-LD proposal should be ignored. While the WYFX-LD application causes interference to WRAP-LD's authorized facilities, the WARP-LD proposal does not cause any interference to WYFX-LD's licensed facilities on Channel 19.

A detailed power density calculation is attached hereto as Exhibit E.

Since no change in the overall height or location of the existing tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the FCC assigned Antenna Structure Registration Number 1013751 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large initial "K" and a long horizontal stroke at the end.

KEVIN T. FISHER

August 2, 2018

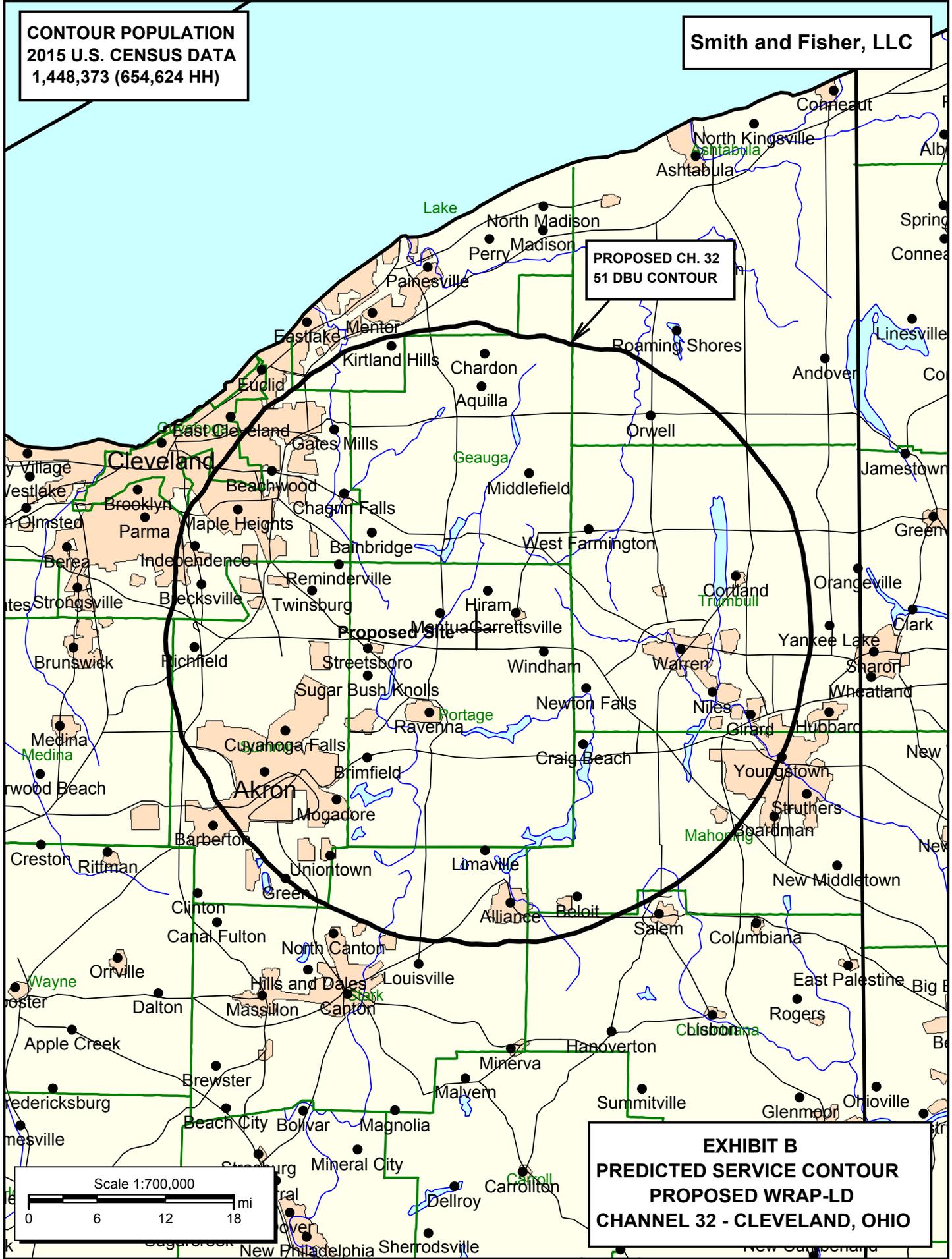
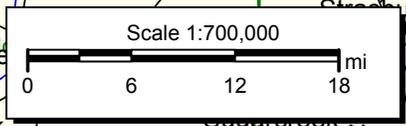
*WARP-LD has filed a petition to deny the pending WYFX-LD application, LMS File No. 0000058272.

CONTOUR POPULATION
2015 U.S. CENSUS DATA
1,448,373 (654,624 HH)

Smith and Fisher, LLC

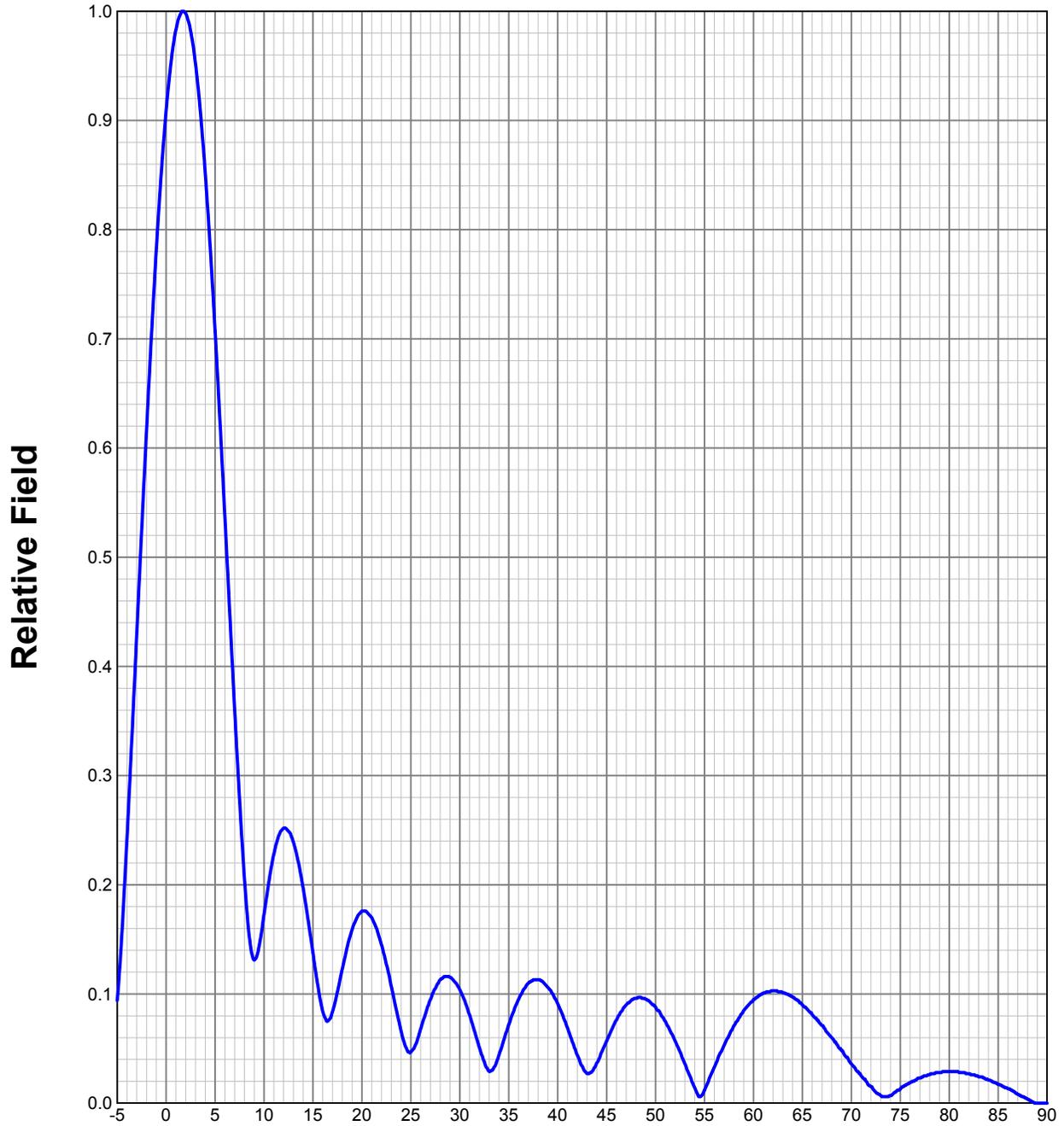
PROPOSED CH. 32
51 DBU CONTOUR

EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED WRAP-LD
CHANNEL 32 - CLEVELAND, OHIO



ELEVATION PATTERN

Type:	<u>AL8</u>		Channel:	<u>32</u>
Directivity:	<u>Numeric</u>	<u>dBd</u>	Location:	<u> </u>
Main Lobe:	<u>8.68</u>	<u>9.39</u>	Beam Tilt:	<u>1.75</u>
Horizontal:	<u>7.17</u>	<u>8.56</u>	Polarization:	<u>Horizontal</u>



Preliminary, subject to final design and review.

TVSTUDY INTERFERENCE ANALYSIS RESULTS
 PROPOSED WRAP-LD
 CHANNEL 32 – CLEVELAND, OHIO

Study created: 2018.08.01 18:11:18

Study build station data: LMS TV 2018-07-31

Proposal: WRAP-LP D32 LD CP CLEVELAND, OH
 File number: BLANK0000001539
 Facility ID: 55107
 Station data: User record
 Record ID: 322
 Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WSSS-LP	N25z		TX LIC	STEUBENVILLE, OH	BLTTL19980506JD	110.7 km
No	WWBP-LP	N25-		TX LIC	FREEDOM, PA	BLTTL19990124JD	99.4
No	W29CO	N29z		TX LIC	SHARON, PA	BLTTL20031216ACI	61.3
No	WMYD	D31		DT CP	DETROIT, MI	BLANK0000034676	212.2
No	WNED-TV	D31		DT APP	BUFFALO, NY	BLANK0000034601	269.7
No	WNED-TV	D31		DT CP	BUFFALO, NY	BLANK0000026684	269.7
Yes	WYTV	D31		DT CP	YOUNGSTOWN, OH	BLANK0000034845	49.0
No	WATM-TV	D31		DT CP	ALTOONA, PA	BLANK0000028661	241.1
No	WWBP-LP	N31+		TX LIC	FREEDOM, PA	BLTTL20040909ABD	99.4
No	WWBP-LP	D31		LD APP	FREEDOM, PA	BDFCDTL20121022ACD	114.8
No	WIIC-LD	D31+		LD LIC	PITTSBURGH, PA	BLANK0000001503	135.7
No	KDKA-TV	D31		LD APP	PITTSBURGH, PA	BDRTCDT20090630ADY	210.6
No	WANE-TV	D32		DT CP	FORT WAYNE, IN	BLANK0000034806	336.5
No	W28DD-D	D32		LD APP	LOUISA, KY	BLANK0000053663	371.6
No	WFQX-TV	D32		DT LIC	CADILLAC, MI	BLCDT20091217ACU	467.4
No	WFQX-TV	D32		DT APP	CADILLAC, MI	BLANK0000035809	467.4
No	WDIV-TV	D32		DT CP	DETROIT, MI	BLANK0000027872	216.7
Yes	WNLO	D32		DT APP	BUFFALO, NY	BLANK0000036123	268.9
No	WNLO	D32		DT LIC	BUFFALO, NY	BLANK0000053502	269.7
No	W59DG	D32		LD CP	ELMIRA, NY	BDISDTL20110829AAJ	375.0
Yes	WOUB-TV	D32		DT CP	ATHENS, OH	BLANK0000025156	232.1
Yes	W32ED-D	D32		LD CP	CANTON, OH	BLANK0000013880	104.5
No	WWRD-LP	N32+		TX LIC	DAYTON, OH	BLTTL20071011AAP	303.1

No	W32DS-D	D32	LD LIC	MAPLEWOOD, OH	BLDTT20110104ABK	292.6
Yes	WYFX-LD	D32	LD APP	YOUNGSTOWN, OH	BLANK0000053007	49.0
Yes	WTAJ-TV	D32	DT LIC	ALTOONA, PA	BLCDT20051018ACE	241.3
Yes	WMVH-CD	D32	DC CP	CHARLEROI, PA	BLANK0000027843	165.7
Yes	W32DH-D	D32	LD LIC	ERIE, PA	BLDTL20101122AHG	125.7
No	WHP-TV	D32	DT CP	HARRISBURG, PA	BLANK0000033781	375.4
No	WKHU-CD	D32	DC CP	KITTANNING, PA	BLANK0000027841	146.4
No	WQPX-TV	D32	DT LIC	SCRANTON, PA	BLCDT20060629AFR	454.0
No	WCAV	D32	DT CP	CHARLOTTESVILLE, VA	BLANK0000034188	430.7
No	WVIR-TV	D32	DT LIC	CHARLOTTESVILLE, VA	BLCDT20040908AAE	430.7
No	W32ES-D	D32	LD CP	SUTTON, WV	BNPDTL20100514AAP	296.5
No	WGRZ	D33	DT APP	BUFFALO, NY	BLANK0000035664	268.9
No	WGRZ	D33	DT LIC	BUFFALO, NY	BLCDT20050705AAG	268.9
No	W33BW	N33+	TX LIC	ASHLAND, OH	BLTTL20020211ABL	112.3
No	WCSN-LD	D33	LD LIC	COLUMBUS, OH	BLDTL20100728AAG	209.0
Yes	WFMJ-TV	D33	DT CP	YOUNGSTOWN, OH	BLANK0000033638	48.3
No	WPXI	D33	LD LIC	PITTSBURGH, PA	BLCDT20130111ABQ	81.0
No	WNPB-TV	D33	DT LIC	MORGANTOWN, WV	BLEDT20121205ACJ	210.6

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D32

Mask: Full Service

Latitude: 41 15 46.10 N (NAD83)

Longitude: 81 9 48.30 W

Height AMSL: 457.0 m

HAAT: 0.0 m

Peak ERP: 15.0 kW

Antenna: Omnidirectional

Elev Pattn: Generic

Elec Tilt: 0.50

50.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	15.0 kW	104.3 m	43.8 km
45.0	15.0	130.5	45.9
90.0	15.0	158.5	47.9
135.0	15.0	139.0	46.5
180.0	15.0	115.4	44.9
225.0	15.0	108.9	44.3
270.0	15.0	107.7	44.1
315.0	15.0	101.5	43.5

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 121 m

**Proposal 25.51 dBu contour crosses Canadian border, coordination required

Distance to Canadian border: 105.2 km

Distance to Mexican border: 2218.0 km

Conditions at FCC monitoring station: Canandaigua NY

Bearing: 59.0 degrees Distance: 370.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 274.5 degrees Distance: 2024.6 km

Study cell size: 1.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

**MX with BLANK0000053007 APP scenario 1, 18.92% interference caused

**MX with BLANK0000053007 APP scenario 2, 18.89% interference caused

**MX with BLANK0000053007 APP scenario 3, 18.90% interference caused

**MX with BLANK0000053007 APP scenario 4, 18.87% interference caused

---- Below is IX received by proposal BLANK0000001539 ----

**MX with scenario 1, 37.14% interference received

**MX with BLANK0000053007 APP scenario 2, 37.14% interference received

POWER DENSITY CALCULATION

PROPOSED WRAP-LD
CHANNEL 32 – CLEVELAND, OHIO

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Cleveland facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15.0 kW, an antenna radiation center 70 meters above ground, and the specific elevation pattern for the proposed ERI 8-bay slotted-cylinder antenna, maximum power density two meters above ground of 0.00095 mW/cm^2 is calculated to occur 35 meters from the base of the tower. Since this is only 0.2 percent of the 0.39 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 32 (578-584 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.