Technical Exhibit

EDUCATIONAL MEDIA CORPORATION
Technical Exhibits in Support of
MINOR CHANGE TO LICENSED FACILITY

WWEM

CHANNEL 219 C1
100 kW ERP (directional antenna)
126 meters HAAT (FCC/NGDC 30 Second Terrain)
338 meters COR AMSL
100 meters COR AGL

ASR# 1044323

37 20 36 N x 78 52 24.9 W (NAD 27)
RUSTBURG, VA

November 9, 2010

INDEX OF FIGURES AND TABLES

EDUCATIONAL MEDIA CORPORATION
Technical Exhibits in Support of
MINOR CHANGE TO LICENSED FACILITY APPLICATION for WWEM

WWEM CH219C1 – 91.7 MHz – 100 kW 126 M HAAT – RUSTBURG, VA

This Exhibit is in support of the Minor Change To Licensed Facility Application for WWEM by EDUCATIONAL MEDIA CORPORATION (herein "Applicant"). Specifically, this application proposes, a new tower site, increased ERP, increased HAAT and a directional antenna

Interference Compliance

Contour protection, as required by C.F.R. Section 73.509 to co-channel, first, second and third adjacent channels is shown herein and is 100% to all stations with the exception of WMLU in which case Applicant respectfully requests a 2nd adjacent channel waiver (Figures 1 – 3, 5). Required spacing with respect to facilities operating on I.F. frequencies is fully compliant with C.F.R. Section 73.207 of the Commission's Rules (Tables 1-1.2).

Environmental Protection Act / RF Radiation Compliance (Table 2)

The Rules require that an addition to any multiple use site must not contribute non-ionizing RF Radiation in excess of the total limits for each class of service in either of the two selected environments.

In the case of FM, this limit is 1,000 microwatts for the controlled, or worker environment, or 200 microwatts for the uncontrolled, or public, environment per square centimeter at 2 meters above ground level.

WWEM proposes to use a 2-bay ERI "Rototiller" type antenna.

The attached Radiofrequency Electromagnetic Exposure Analysis (Table 2) specifically lists all potential sources of radiation and estimates the power density expected to occur at a distance of 10 meters from the base of the tower, the maximum power density expected from each source, the maximum distance from the base of the tower to the point of maximum power density for each source, and the total worst case (sum of all maximum power densities, from all sources, at the most distant maximum occurring power density). The power density values are in units of microwatts per square meter at a height of 2 meters above ground level. These levels are also expressed relative to the maximum allowable limit of each of the two environments (see Table 2).

Considering all existing and proposed sources, the total contribution of all potential sources of radiation within 10 meters from the base of the tower (controlled

environment) is 22.7 microwatts per square centimeter at 2 meters above ground level which is 2.3% of the ANSI limit for the controlled environment.

For the uncontrolled environment, the sum of all individual source maximum power densities is 100 microwatts per square centimeter at 2 meters above ground level. The maximum power density value extends no farther than 65.6 meters from the base of the tower. This represents a “worst case” power density level which is only 50% of the ANSI limit for the uncontrolled environment.

Given that access within 10 meters to the site is restricted by a locked fence, and given that no more than 100 microwatts per square centimeter at 2 meters above ground level (50% of the ANSI limit) is predicted to occur at any point beyond 65.6 meters from the base of the tower, the total radiation contributed by WWEM would be less than the ANSI limit for all points in both the controlled and the uncontrolled environments. Therefore, this proposal is fully compliant with the provisions of OET Bulletin #65 as recently amended.

The contribution of WWEM was calculated using FCC FM Model v2.10 Beta. Further to the requirements and intentions of the FCC, appropriate signs are currently posted at entrances to the property, on the walls and doors of buildings containing transmitters, and on fences warning the public and workers of the potential hazard.

Applicant will require that the power to the antenna be reduced as necessary to accommodate workers or will discontinue operation, if necessary, for this purpose.

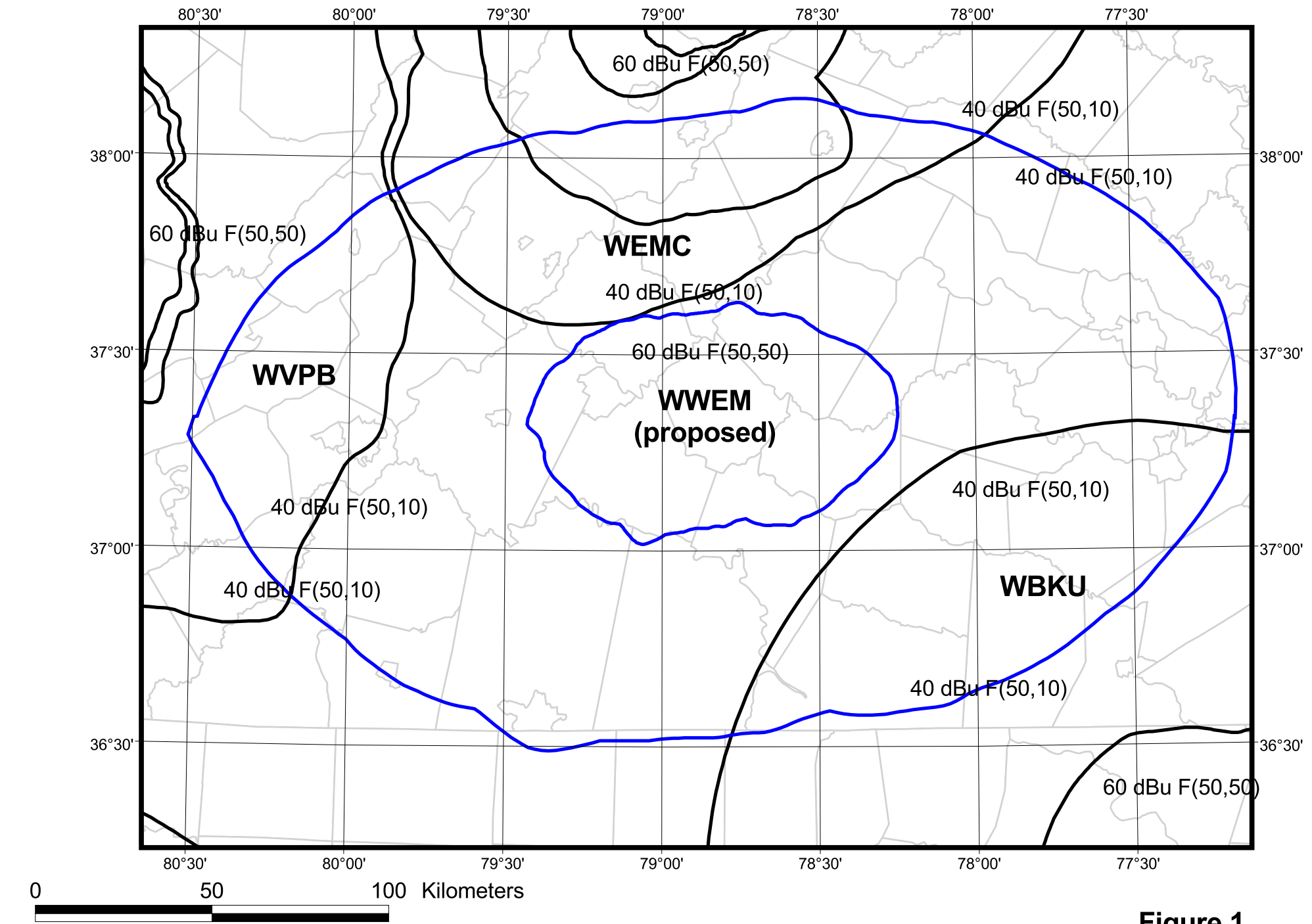

Figure 1

WWEM, RUSTBURG, VA: MINOR CHANGE TO LICENSED FACILITY
Co-channel study

Radio Data Services

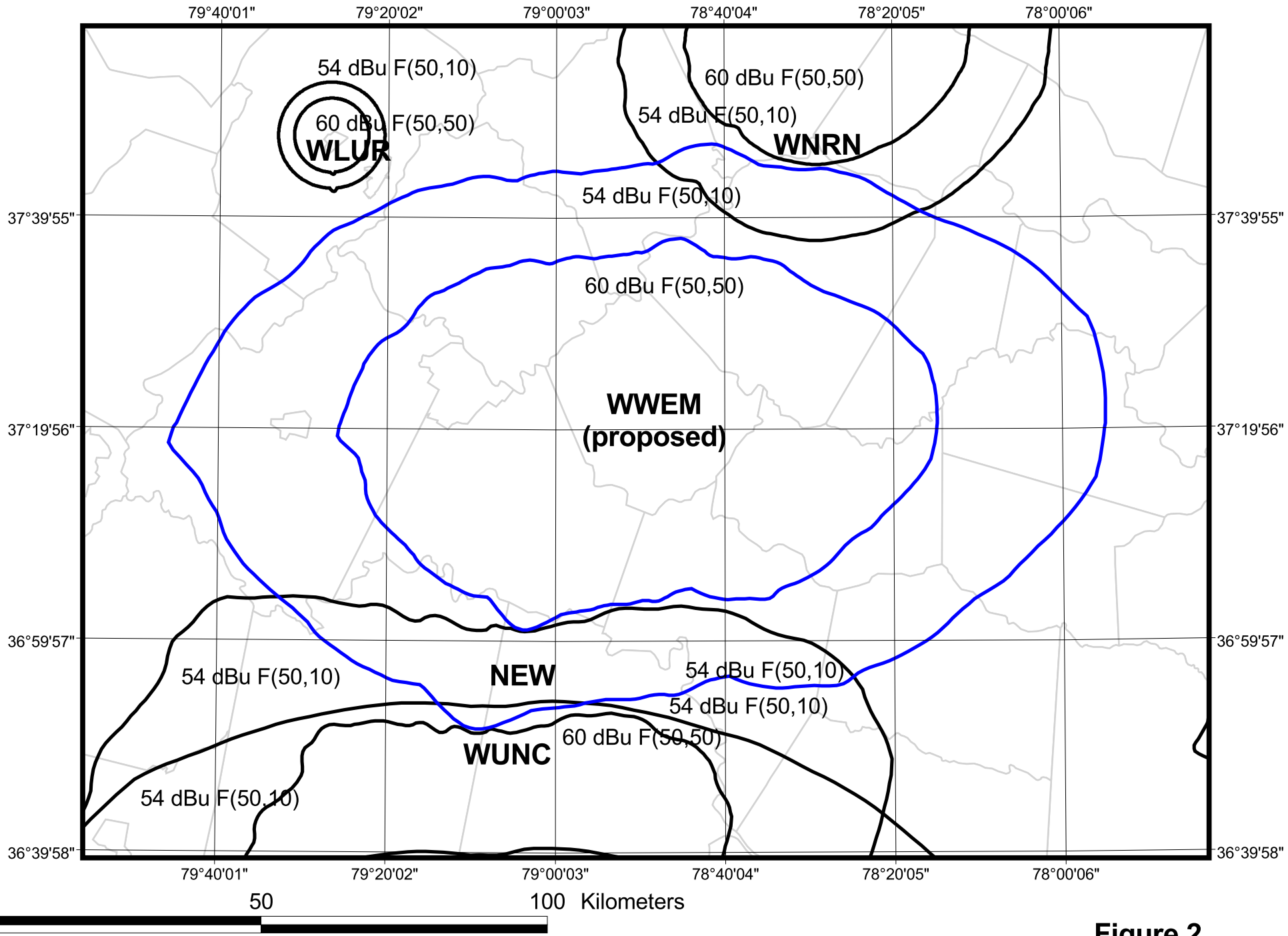

Figure 2

WWEM, RUSTBURG, VA: MINOR CHANGE TO LICENSED FACILITY
1st adjacent channel study

Radio Data Services

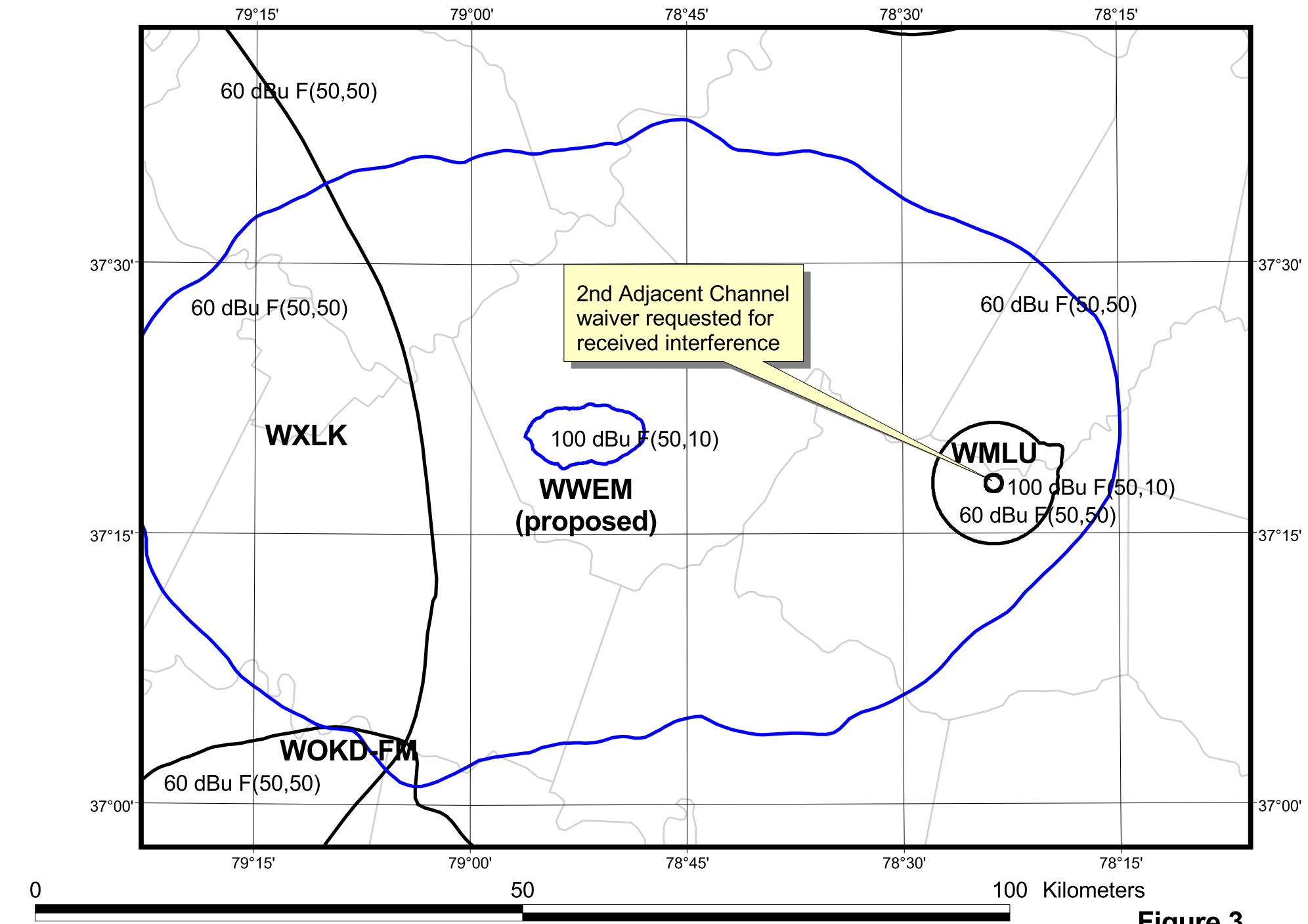

Figure 3

WWEM, RUSTBURG, VA: MINOR CHANGE TO LICENSED FACILITY
2nd and 3rd adjacent channel study

Radio Data Services

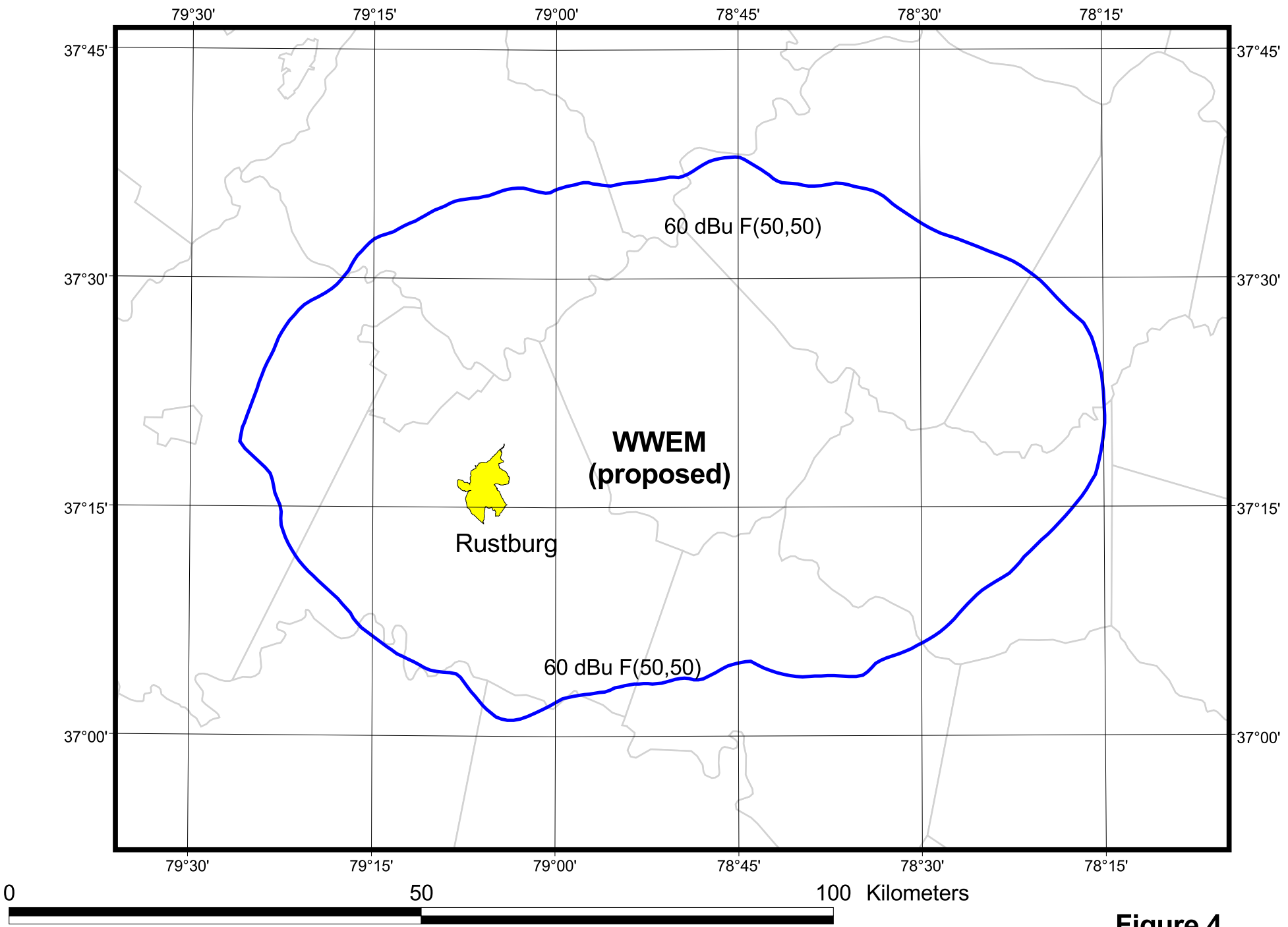

Figure 4

WWEM, RUSTBURG, VA: MINOR CHANGE TO LICENSED FACILITY
Community Coverage: RUSTBURG, VA

Radio Data Services

Table 1

WWEM Minor Change to Licensed Facility
Channel Study with respect to 73.509 contour overlap protection

Chan	Class	Call Letters	Type	Status	City	State	Country	Owner	Distance (km)	Bearing TO (deg)	Req. Dist. (km)	Clearance (km)	
216	B1	WTJU	FM	LIC	CHARLOTTESVILLE	VA	US	UNIVERSITY OF VIRGINIA	78.8	25.7	35.1	43.7	
216	C2	WOKD-FM	FM	LIC	DANVILLE	VA	US	POSITIVE ALTENATIVE RAI	80.8	214.3	47.4	33.4	
217	A	WMLU	FM	LIC	FARMVILLE	VA	US	LONGWOOD UNIVERSITY	42.6	96.8	55.5	-12.8	(2nd adj. Waiver requested)
217	B1	NEW	FM	APP	STAUNTON	VA	US	STUCOMM, INC.	76.8	339.4	31.9	44.9	
217	B1	NEW	FM	APP	GREENVILLE	VA	US	CALVARY CHAPEL OF STA	76.8	339.4	31.9	44.9	
217	C3	WPAR	FM	LIC	SALEM	VA	US	POSITIVE ALTERNATIVE R/	93.1	272.4	51.3	41.9	
218	A	WLUR	FM	LIC	LEXINGTON	VA	US	WASHINGTON AND LEE UN	71.2	315.0	62.1	9.2	
218	A	NEW	FM	APP	COLUMBIA	VA	US	LIBERTY UNIVERSITY, INC.	85.9	51.5	81.2	4.7	
218	C	WUNC	FM	LIC	CHAPEL HILL	NC	US	BOARD OF TRUSTEES UNI'	166.3	189.1	149.9	16.4	
219	**A**	**WWEM**	**FM**	**LIC**	**RUSTBURG**	**VA**	**US**	**EDUCATIONAL MEDIA COF**	**20.2**	**251.5**	**159.5**	**-139.2**	(same as applicant)
219	A	WEMC	FM	LIC	HARRISONBURG	VA	US	BOARD OF TRUSTEES OF I	125.5	359.7	106.5	19.0	
219	B	WEMC	FM	CP	HARRISONBURG	VA	US	BOARD OF TRUSTEES OF I	135.5	357.2	130.9	4.6	
219	A	NEW	FM	APP	SPOTSYLVANIA	VA	US	JKJ EDUCATIONAL FOUND	150.1	52.7	136.0	14.1	
219	A	NEW	FM	APP	SPOTSYLVANIA	VA	US	COMMONWEALTH PUBLIC	153.3	51.5	135.5	17.7	
219	B1	NEW	FM	APP	TAPPAHANNOCK	VA	US	EMPOWERED PEOPLE, INC	181.9	63.2	165.6	16.3	
219	B1	NEW	FM	APP	BOWLING GREEN	VA	US	THE HELPLINE	182.0	66.7	173.6	8.4	
219	B	WVPB	FM	LIC	BECKLEY	WV	US	WEST VIRGINIA EDUCATIO	196.2	288.9	168.5	27.6	
219	A	NEW	FM	APP	TAPPAHANNOCK	VA	US	ACTION, INC.	198.0	72.0	159.8	38.2	
219	B1	NEW	FM	APP	TAPPAHANNOCK	VA	US	HAMPTON ROADS EDUCAT	198.4	69.7	174.3	24.0	
219	C2	WBKU	FM	LIC	AHOSKIE	NC	US	AMERICAN FAMILY ASSOC	203.1	132.6	190.6	12.5	
220	A	WNRN	FM	LIC	CHARLOTTESVILLE	VA	US	STU-COMM, INC.	78.8	25.7	76.4	2.5	
220	A	NEW	FM	APP	MILTON	NC	US	PIEDMONT COMMUNITY SE	83.1	200.3	82.3	0.8	
220	C1	NEW	FM	CP	MILTON	NC	US	SOLID FOUNDATION BROA	87.6	195.6	86.0	1.6	
220	A	NEW	FM	CP	JARRATT	VA	US	ROANOKE VALLEY COMMU	139.9	111.7	92.0	47.9	

NOTE: WWEM proposed site is located no closer than 11 km to the FCC Zone I boundary

Table 1.2

WWEM Minor Chane To Licensed Facility
Channel Study with respect to 73.207 minimum distance seperations

Chan	Class	Call Letters	Type	Status	City	State	Country	Owner	Distance (km)	Bearing TO (deg)	Req. Dist. (km)	Clearance (km)	Rule
221	B1	WCDX	FM	LIC	MECHANICSVILLE	VA	US	RADIO ONE LICENSES, LLC	124	75	77	47	73.207
221	A	WPPT	FM	LIC	MERCERSBURG	PA	US	M. BELMONT VERSTANDIG, INC	289	18	75	214	73.207
221	A	WRSV	FM	LIC	ROCKY MOUNT	NC	US	NORTHSTAR BROADCATING C(	198	149	75	123	73.207
221	B1	WCDX	FS	LIC	MECHANICSVILLE	VA	US	RADIO ONE LICENSES, LLC	135	76	77	58	73.207
221	C3	WKSA	FM	LIC	MOYOCK	NC	US	CC LICENSES, LLC	249	108	76	173	73.207
222	B	WERQ-FM	FM	LIC	BALTIMORE	MD	US	RADIO ONE LICENSES, LLC	294	40	79	215	73.207
222	A	WWHC	FM	LIC	OAKLAND	MD	US	WMD RADIOWERKS, INC.	240	346	75	165	73.207
222	C0	WKRR	FM	LIC	ASHEBORO	NC	US	DICK BROADCASTING COMPAN	189	207	94	95	73.207
222	L1	WYRC-LP	FL	LIC	SPENCER	WV	US	ROANE COUNTY BOARD OF ED	273	308	0	273	73.207
222	C	WXLK	FM	LIC	ROANOKE	VA	US	MEL WHEELER, INC.	114	262	105	9	73.207
222	A	WTYD	FM	LIC	DELTAVILLE	VA	US	DAVIS MEDIA, LLC	215	85	75	140	73.207
272	A	WZGN	FM	LIC	CROZET	VA	US	MONTICELLO MEDIA LLC	83	8	22	61	73.207

Request for Waiver of 47 C.F.R. Section 73.509

Educational Media Corporation ("EMC") desires to increase the power and service area of station WWEM.

This proposal is engineered so as to NOT CAUSE interference to any existing station, known application or allocation. However, the proposed increased service area would RECEIVE interference from the following second adjacent facility:

Facility ID	Status	Call Sign (or File #)	City of License	Exhibit
4311	LIC	WMLU	Farmville, VA	(see Figure 2)

Again, this proposal will not cause interference to the above proposed facility as WWEM's proposed interfering 100 dBu contour will not overlap the WMUL protected 60 dBu contour. WWEM's proposed protected contour would, however, receive prohibited overlap from the proposed facility listed above.

The area of "overlap received" from the above referenced facility will be approximately 2.3 km^2, which is 0.04% of the total area of WWEM's proposed 60 dBu

The grant of this waiver request will allow WWEM to increase its overall land coverage (excluding water) area by 2,629 square kilometers, an increase of 103%. It will provide new service to an estimated 28,462 persons. This waiver request is nearly identical to the requests made by the licensees of WCPE(FM) and WCCE(FM) in *Educational Information Corporation*, 6 FCC Rcd 2207 (1991). WCPE(FM) requested a waiver in its application to permit *de minimus* overlap "received," and WCCE(FM) requested a waiver in its application to permit *de minimus* overlap "caused." In recognition of the importance of affording noncommercial educational stations the flexibility to expand and meet the growing demand for service, the Commission granted both waiver requests. The instant request fully satisfies the criteria established by the Commission for waiver of Section 73.509 of the Commission's rules as it pertains to overlap received.[1]

Significant service will be maintained and enhanced by the proposed expansion of WWEM, and the overlap area is very small and well within the scope of the Commission's waiver policy. Clearly, this benefit heavily outweighs the potential for interference in an area that constitutes less than 0.04% (total) of the station's proposed service area. Accordingly Call respectfully submits that a waiver of Section 73.509(a) of the Commission's rules is justified in this instance.

[1] EMC wishes to emphasize that its request is not at all similar to the second waiver request made by WCPE in *Educational Information Corporation*, 1997 FCC LEXIS 2636 (May 20, 1997). Unlike here, WCPE was seeking a waiver of overlap "caused" in that second case.

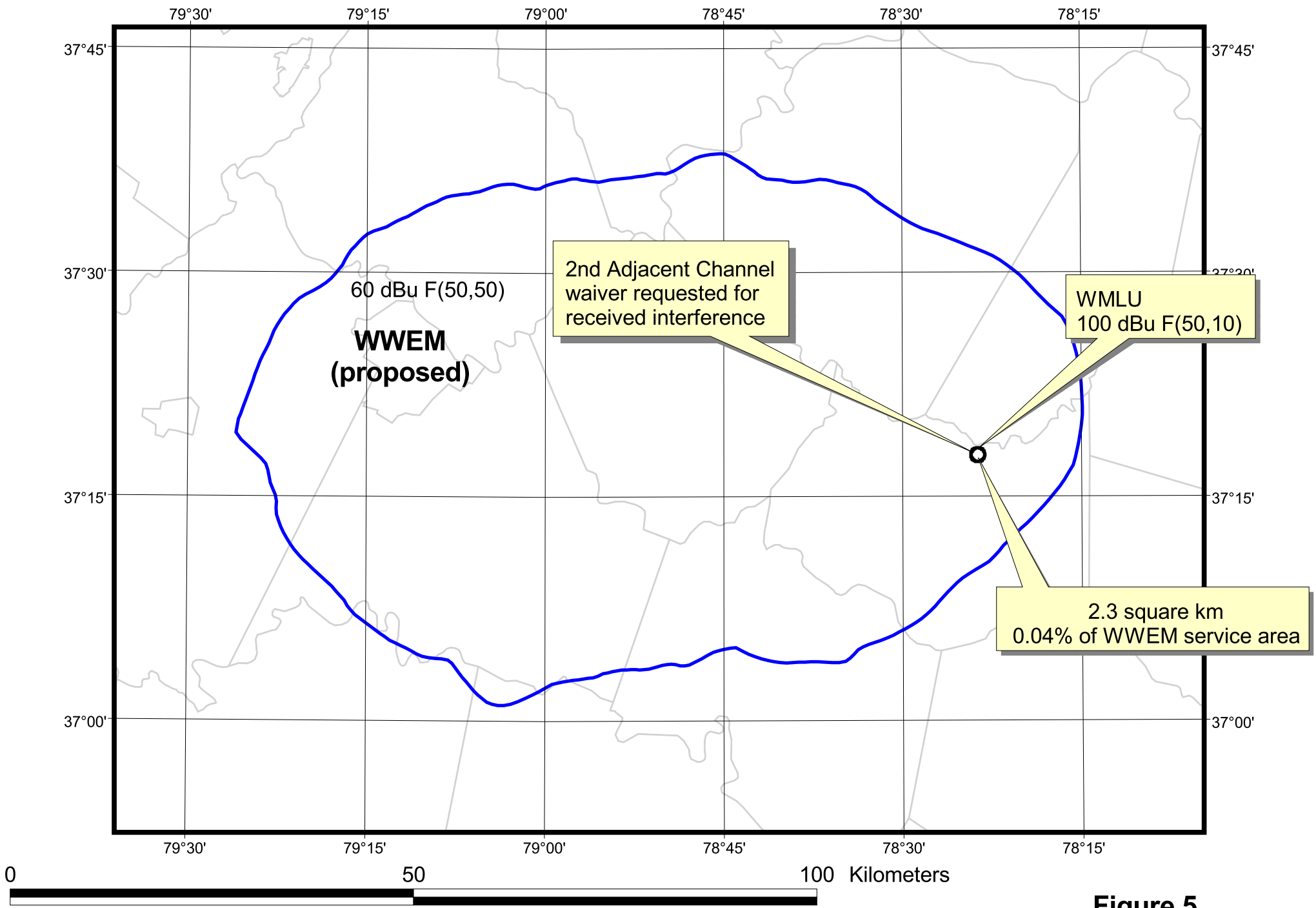

Figure 5

WWEM, RUSTBURG, VA: MINOR CHANGE TO LICENSED FACILITY
2nd Adjacent Channel Waiver Request

Radio Data Services

Radiofrequency Electromagnetic Exposure Analysis for WWEM

Source	Height AGL(m)	Antenna type	Bays	Horizontal ERP (kw)	Vertical ERP (kw)	Power Density $\mu W/cm^2$ at 2 meters AGL: at 10 meters distance	% controlled environment limit ($1000\ \mu W/cm^2$)	Max. PD	% uncontrolled environment limit ($200\ \mu W/cm^2$)	Distance to maximum PD (m)	
WWEM	**100**	**ERI "Rototiller" (EPA)**	**2**	**100.0**	**100.0**	**22.7**	**2.3%**	**100**	**50.0%**	**65.6**	**(proposed)**
						22.7	**2.3%**	100	**50.0%**	65.6	

The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments).

Calculations made using FCC FM Model v2.10 Beta