



## **ENGINEERING STATEMENT**

**IN SUPPORT OF**

**APPLICATION FOR MINOR CHANGE TO CONSTRUCTION PERMIT**

**WSEE-TV**

**ERIE, PA**

### **Background**

Lilly Broadcasting of Pennsylvania License Subsidiary, LLC (Lilly) is the licensee of WSEE which has been authorized to operate its post-incentive auction facility on Ch. 21 (0000028628) at Erie, PA, with an ERP of 84.5 kW at an HAAT of 271.0m. The tower is located at the following coordinates:

42° 03' 52.2'' N (NAD 83)  
80° 00' 18.2'' W

Lilly now wishes to move the post-incentive auction facility to a nearby tower (approximately 2.3 km away) and increase its ERP from 84.5 kW to 105 kW. The coordinates of the proposed tower is at the following coordinates:

42° 02' 16.0'' N (NAD 83)  
80° 03' 43.0'' W

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### **Antenna System and Tower**

Lilly intends to install a new top-mounted, omni-directional Ch. 21 antenna (Dielectric TFU-16GTH/VP-R 04A) on the registered tower ASR#1055828. The azimuth and elevation patterns and dBk table for the proposed antenna have been attached to the application. The antenna will have a center of radiation of 628.7m AMSL (with a calculated HAAT of 291.0m).

The new Ch. 21 antenna will be elliptically polarized. The vertically polarized radiation will not exceed the horizontally polarized component in any azimuth.

### **Coverage**

The entire principal community of Erie, PA is well within the predicted F(50,90) 48 dBu contour based on the proposed directional 105 kW ERP.

### **Interference**

An interference check study was run using the FCC TVStudy software (Version 2.2.3) for the proposed WSEE post-repack maximized facility parameters. The summary results of the study show that the proposed facility is not predicted to cause more than 0.5% new interference to any other surrounding co-channel or adjacent channel post-repack facilities (see attached study results).

### **Environmental/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA

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are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

The location of the proposed post-incentive auction facility is assumed to currently be “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.001686 mW/cm<sup>2</sup>, which is less than 5% of the MPE for public exposure (0.375333 mW/cm<sup>2</sup>) at Ch. 29 (560-566 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain “in compliance” with FCC guidelines.

Lilly agrees to comply with the Commission’s requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of potential RFR hazards is posted.

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### **Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

A handwritten signature in black ink, appearing to read "B. Pidek", written over a horizontal line.

Benjamin L. Pidek, P.E.  
November 1, 2017

Attached:  
WSEE TVStudy Interference Results

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## WSEE Maximization TVStudy Summary Results

Study created: 2017.11.01 09:56:56

Study build station data: LMS TV 2017-10-11 (8)

Proposal: WSEE-TV D21 DT CP ERIE, PA  
File number: WSEE-LT-105k-Omni  
Facility ID: 49711  
Station data: User record  
Record ID: 558  
Country: U.S.  
Zone: I

Search options:  
Non-U.S. records included  
Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
WWJ-TV	D21	DT	APP	DETROIT, MI	BLANK0000025826	260.0 km
WWJ-TV	D21	DT	BL	DETROIT, MI	DTVBL72123	260.0
WROC-TV	D21	DT	CP	ROCHESTER, NY	BLANK0000027721	236.7
WROC-TV	D21	DT	BL	ROCHESTER, NY	DTVBL73964	236.7
WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	338.6
WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	171.5
WPNT	D21	DT	BL	PITTSBURGH, PA	DTVBL73907	171.5
CICO-DT-28D22	DT	LIC		KITCHENER, ON	BLANKCANADA183	139.6

No non-directional AM stations found within 0.8 km

Directional AM stations within 3.2 km:  
WRIE 1260 L DA2 D ERIE, PA BL  
WRIE 1260 L DA2 N ERIE, PA BL

Record parameters as studied:

Channel: D21  
Latitude: 42 2 16.00 N (NAD83)  
Longitude: 80 3 43.00 W  
Height AMSL: 628.7 m  
HAAT: 271.0 m  
Peak ERP: 105 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic  
Elec Tilt: 1.00

39.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	105 kW	401.4 m	90.3 km
45.0	105	267.8	77.8
90.0	105	219.7	74.1
135.0	105	229.9	74.9
180.0	105	202.6	72.8
225.0	105	254.5	76.7
270.0	105	348.4	86.2
315.0	105	406.5	90.6

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Database HAAT does not agree with computed HAAT  
Database HAAT: 271 m    Computed HAAT: 291 m

\*\*Proposal service area extends beyond baseline plus 1.0%  
Proposal service area population is more than 95.0% of baseline

\*\*Proposal is within coordination distance of Canadian border  
Distance to Canadian border: 39.6 km

Distance to Mexican border: 2340.6 km

Conditions at FCC monitoring station: Canandaigua NY  
Bearing: 66.1 degrees    Distance: 249.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 272.8 degrees    Distance: 2110.5 km

No land mobile station failures found

Study cell size: 2.00 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 BLANK0000025826 APP, 2.52% interference, scenario 1  
\*\*MX with BLANK0000025826 APP, 2.52% interference, scenario 2  
\*\*MX with BLANK0000025826 APP, 2.49% interference, scenario 3  
\*\*MX with BLANK0000025826 APP, 2.49% interference, scenario 4  
Proposal receives 2.52% interference from scenario 5  
Proposal receives 2.52% interference from scenario 6  
Proposal receives 2.49% interference from scenario 7  
Proposal receives 2.49% interference from scenario 8

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