MID-STATE CONSULTANTS

ENGINEERING STATEMENT

IN SUPPORT OF

APPLICATION FOR MINOR CHANGE TO CONSTRUCTION PERMIT

WCPO-TV

CINCINNATI, OH

Background

Scripps Broadcasting Holdings LLC (Scripps) is the licensee of WCPO which has been authorized to operate its post-incentive auction facility on Ch. 26 (0000026815) at Cincinnati, OH, with an ERP of 985 kW at an HAAT of 297.0m. The tower is located at the following coordinates:

39° 07’ 30.4’’ N (NAD 83)
84° 29’ 56.0’’ W

Scripps now wishes to “maximize” the WCPO post-incentive auction facility ERP from 985 kW to 1000 kW; all other facility parameters will remain the same.

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Antenna System and Tower

WCPO intends to replace the existing top-mounted omni-directional Ch. 22 antenna (Dielectric TFU-36GTH/VP-R O6) with a new omni-directional coaxial slot antenna for Ch. 26 (Dielectric TFU-36GTH/VP-R O6). The antenna will be installed on the registered tower ASR#1013618 which will have a new overall height of 518.7m AMSL (with appurtenances) and the antenna will have a center of radiation of 506.7m AMSL (with a calculated HAAT of 297m).

The replacement of the top-mounted antenna will result in a 2.5m reduction in the overall height of the structure. The height of the antenna radiation center will be reduced by 2.1m. Scripps plans to notify the FAA of the reduction in structure height and update the ASR after construction of the new Ch. 26 facility is complete.

The new Ch. 26 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 Cincinnati, OH is well within the predicted F(50,90) 48 dBu contour based on the proposed omni-directional 1000 kW ERP.

Interference

An interference check study was run using the FCC TVStudy software (Version 2.2.3) for the proposed WCPO 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 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 a multi-user site and it is assumed that the site is currently "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 0.005459 mW/cm^2, which is less than 5% of the MPE for public exposure (0.363333 mW/cm^2) at Ch. 26 (542-548 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain "in compliance" with FCC guidelines.

Scripps 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.

Benjamin L. Pidek, P.E.
October 24, 2017

Attached:
WCPO TVStudy Interference Results

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WCPO Maximization TVStudy Summary Results

Study created: 2017.10.12 16:20:40

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

```
    Proposal: WCPO-TV D26 DT CP CINCINNATI, OH
 File number: WCPO-CP-1000k
 Facility ID: 59438
Station data: User record
   Record ID: 383
     Country: U.S.
        Zone: I
```

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
WRTV	D25	DT	LIC	INDIANAPOLIS, IN	BLCDT20090623ACJ	169.4 km
WUPX-TV	D25	DT	CP	MOREHEAD, KY	BLANK0000027033	154.9
WUPX-TV	D25	DT	BL	MOREHEAD, KY	DTVBL23128	154.9
WFIE	D26	DT	CP	EVANSVILLE, IN	BLANK0000025161	296.5
WFIE	D26	DT	BL	EVANSVILLE, IN	DTVBL13991	296.5
WUPW	D26	DT	CP	TOLEDO, OH	BLANK0000025186	295.1
WATE-TV	D26	DT	LIC	KNOXVILLE, TN	BMLCDT20041203AEG	350.4
WTVQ-DT	D27	DT	CP	LEXINGTON, KY	BLANK0000026675	121.6
WTVQ-DT	D27	DT	BL	LEXINGTON, KY	DTVBL51597	121.6
WTTE	D27	DT	CP	COLUMBUS, OH	BLANK0000025696	155.6
WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	155.6

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

```
    Channel: D26
   Latitude:  39  7 30.40 N (NAD83)
  Longitude:  84 29 56.00 W
Height AMSL: 506.7 m
       HAAT: 297.0 m
   Peak ERP: 1000 kW
    Antenna: Omnidirectional
Elev Pattrn: Generic
  Elec Tilt: 0.50
```

40.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1000 kW	294.5 m	98.4 km
45.0	1000	271.5	95.4
90.0	1000	329.9	102.0
135.0	1000	324.4	101.5
180.0	1000	312.8	100.4
225.0	1000	287.4	97.5
270.0	1000	278.7	96.4
315.0	1000	273.2	95.6

Proposal service area is within baseline plus 1.0%

Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 322.7 km

Distance to Mexican border: 1852.9 km

Conditions at FCC monitoring station: Allegan MI
Bearing: 342.9 degrees Distance: 405.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 280.3 degrees Distance: 1773.7 km

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%

Proposal receives 0.61% interference from scenario 1
Proposal receives 0.61% interference from scenario 2
Proposal receives 0.61% interference from scenario 3
Proposal receives 0.61% interference from scenario 4
Proposal receives 0.61% interference from scenario 5
Proposal receives 0.61% interference from scenario 6
Proposal receives 0.61% interference from scenario 7
Proposal receives 0.61% interference from scenario 8
Proposal receives 0.61% interference from scenario 9
Proposal receives 0.61% interference from scenario 10
Proposal receives 0.61% interference from scenario 11
Proposal receives 0.61% interference from scenario 12
Proposal receives 0.61% interference from scenario 13
Proposal receives 0.61% interference from scenario 14
Proposal receives 0.61% interference from scenario 15
Proposal receives 0.61% interference from scenario 16
Proposal receives 0.71% interference from scenario 17
Proposal receives 0.71% interference from scenario 18
Proposal receives 0.71% interference from scenario 19
Proposal receives 0.71% interference from scenario 20
Proposal receives 0.71% interference from scenario 21
Proposal receives 0.71% interference from scenario 22
Proposal receives 0.71% interference from scenario 23
Proposal receives 0.71% interference from scenario 24
Proposal receives 0.71% interference from scenario 25
Proposal receives 0.71% interference from scenario 26
Proposal receives 0.71% interference from scenario 27
Proposal receives 0.71% interference from scenario 28
Proposal receives 0.71% interference from scenario 29
Proposal receives 0.71% interference from scenario 30
Proposal receives 0.71% interference from scenario 31
Proposal receives 0.71% interference from scenario 32
Proposal receives 0.61% interference from scenario 33
Proposal receives 0.61% interference from scenario 34
Proposal receives 0.61% interference from scenario 35
Proposal receives 0.61% interference from scenario 36
Proposal receives 0.62% interference from scenario 37
Proposal receives 0.62% interference from scenario 38
Proposal receives 0.62% interference from scenario 39
Proposal receives 0.62% interference from scenario 40

Proposal receives 0.61% interference from scenario 41
Proposal receives 0.61% interference from scenario 42
Proposal receives 0.61% interference from scenario 43
Proposal receives 0.61% interference from scenario 44
Proposal receives 0.62% interference from scenario 45
Proposal receives 0.62% interference from scenario 46
Proposal receives 0.62% interference from scenario 47
Proposal receives 0.62% interference from scenario 48
Proposal receives 0.71% interference from scenario 49
Proposal receives 0.71% interference from scenario 50
Proposal receives 0.71% interference from scenario 51
Proposal receives 0.71% interference from scenario 52
Proposal receives 0.72% interference from scenario 53
Proposal receives 0.72% interference from scenario 54
Proposal receives 0.72% interference from scenario 55
Proposal receives 0.72% interference from scenario 56
Proposal receives 0.71% interference from scenario 57
Proposal receives 0.71% interference from scenario 58
Proposal receives 0.71% interference from scenario 59
Proposal receives 0.71% interference from scenario 60
Proposal receives 0.72% interference from scenario 61
Proposal receives 0.72% interference from scenario 62
Proposal receives 0.72% interference from scenario 63
Proposal receives 0.72% interference from scenario 64
No IX check failures found.