Certification of Ability to Comply with 47 CFR 1.1311 & OET 65

WESU will be able to ensure that the proposed facilities will be compliant with OET 65 and 47 CFR 1.1311. WESU proposes to employ a multi-bay, circularly polarized antenna to help limit human exposure to radio frequency energy on the roof of the building upon which the tower is mounted. The antenna will be designed to minimize potential exposure, and a field survey at time of construction and testing will be performed to facilitate the creation of a fully compliant RF exposure management program. The rooftop area is a controlled area secured from unauthorized entry, and the University will ensure that all personnel who have occasion to work there will be suitably informed and equipped to manage their exposure, to the extent that exposure management is required. Exposure on the ground near the building will be compliant with the general population/uncontrolled exposure standards.

FCC Form 340 / Worksheet 7 / RF Worksheet 1 - Applied to WESU Facilities

EFFECTIVE RADIATION CENTER HEIGHT

1. Enter proposed "Height of radiation center above ground" OR as listed in line 1	44m
2. Is antenna supporting structure located on the roof of a building ? (check one)	Yes
3. If line 2 is "yes," enter the building height measured at the base of the antenna	30m
If line 2 is "no," enter "0" in line 3	n/a
4. Subtract line (3) from line (1)	14m
5. Subtract the value 2.0 from line (4)	12m

TOTAL EFFECTIVE RADIATED POWER

(If "beam tilt" is utilized, list maximum values)

6. List Effective Radiated Power in the Horizontal Plane.	6 kW
7. List Effective Radiated Power in the Vertical Plane	6 kW
8. Add Lines (6) and (7) OR list value from Line 2 in Worksheet 1A	12 kW

PERCENTAGE OF FCC RF LIMIT(S) FOR MAXIMUM PERMISSIBLE EXPOSURE

9. Multiply Line (8) by 33.41	400.92
10. Multiply the value listed in line (5) by itself	144
11. Divide Line (9) by Line (10)	2.784
12. Multiply Line (11) by (100)	278.4%

DETERMINATION OF COMPLIANCE WITH CONTROLLED/OCCUPATIONAL LIMIT

13. Does Line (12) exceed 100%	**YES**

IF YOU ANSWERED "YES" IN LINE (13), THE WORKSHEETS MAY NOT BE USED IN THIS CASE. *

IF YOU ANSWERED "NO" IN LINE (13), THEN THE SITE SHOULD COMPLY WITH THE FCC'S CONTROLLED/ OCCUPATIONAL RF EXPOSURE LIMITS FOR GROUND LEVEL EXPOSURE.

*** In this case, you may need to prepare an Environmental Assessment.**

EXPLANATION: In the downward angles toward the roof, the emissions of WESU's proposed facility are significantly attenuated below the ERP in the horizontal plane. At depression angles

of 45 degrees or more, typical four-bay, full-wave spaced four-bay antennas have a minimum attenuation on the major downlobes of 9 to 14 dB. Using 10 dB as an initial estimate, the 313% exposure potential estimated in the worksheet would be downgraded to a 31% level simply from accounting for the antenna vertical pattern. If upon final design and specification of the antenna it is determined that further suppression is necessary, an additional ten to twenty dB of attenuation is attainable with a half-wave spaced antenna. Upon issuance of a construction permit, the station will finalize an antenna design that strikes the necessary balance between cost, structural loading, and RF exposure potential, and develop an RF exposure management program suited to the conditions.

DETERMINATION OF COMPLIANCE WITH THE UNCONTROLLED/GENERAL POPULATION LIMIT

14. Does Line (12) exceed 20% . . . . . **YES**

IF YOU ANSWERED "NO" IN LINE (14), THEN THE SITE SHOULD COMPLY WITH THE FCC'S UNCONTROLLED/ GENERAL POPULATION RF EXPOSURE LIMITS FOR GROUND LEVEL EXPOSURE. NO FURTHER STUDY REQUIRED.

IF YOU ANSWERED "YES" IN LINE (14), CONTINUE.

Rooftop with restricted access.

If you answered "yes" in Line (14) and "yes" in Line (2) (indicating that the tower is located on the roof of a building), and the general public is not allowed access to the rooftop level, repeat lines 5 through 12, entering the value in Line (1) directly in Line (4).

(If Multiple FM Use Tower, recalculations should be in accordance with instructions on Worksheet #1A.)

1. Enter proposed "Height of radiation center above ground" OR as listed in line 1	**44m**
2. Is antenna supporting structure located on the roof of a building ? (check one)	Yes
3. If line 2 is "yes," enter the building height measured at the base of the antenna	30m
If line 2 is "no," enter "0" in line 3	n/a
4. Subtract line (3) from line (1)	**44m**
5. Subtract the value 2.0 from line (4)	42m

TOTAL EFFECTIVE RADIATED POWER

(If "beam tilt" is utilized, list maximum values)

6. List Effective Radiated Power in the Horizontal Plane.	6 kW
7. List Effective Radiated Power in the Vertical Plane	6 kW
8. Add Lines (6) and (7) OR list value from Line 2 in Worksheet 1A	12 kW

PERCENTAGE OF FCC RF LIMIT(S) FOR MAXIMUM PERMISSIBLE EXPOSURE

9. Multiply Line (8) by 33.41	400.92
10. Multiply the value listed in line (5) by itself	1764
11. Divide Line (9) by Line (10)	0.2272
12. Multiply Line (11) by (100)	22.72%

Upon recalculation, does Line (12) exceed 20% . . . . . YES

IF YOU ANSWERED "YES" IN LINE (15), THE WORKSHEETS MAY NOT BE USED IN THIS CASE.

IF YOU ANSWERED "NO" IN LINE (15), THEN THE AREA AT GROUND LEVEL SHOULD COMPLY WITH THE FCC'S UNCONTROLLED/GENERAL POPULATION EXPOSURE LIMIT. NO FURTHER STUDY REQUIRED.

EXPLANATION B: See above **Explanation A** for relevant information. In addition, as defined by OET 65 Supplement A, page 18, Table 6 "Minimum height for single FM antenna compliance with general population/uncontrolled exposure limits."…a four-bay antenna with total ERP of 10kW needs a radiation center height of 33.3m / 13.1m (worst/best case) above ground level (since the rooftop tower has restricted access).

A 4-bay antenna with total ERP of 25kW needs a radiation center height of 51.5m / 19.6m (worst/best case) above ground level.

The total ERP of the proposed WESU facility is 12kW. We interpolate that the worst-case height required is 35.73m and the best-case height required is 13.97m.

The proposed WESU radiation center above ground level (RCAGL) is 44m, which is HIGHER THAN both the worst-case and best-case minimum heights. Therefore, WESU will meet the uncontrolled/general population limit.