

**LIEBERMAN & WALISKO**  
*CONSULTING TELECOMMUNICATIONS ENGINEERS*  
701 YEATMAN PARKWAY  
SILVER SPRING, MD 20902

---

KMQA - Porterville, CA

ENGINEERING STATEMENT

**I ABSTRACT**

This engineering exhibit supports the application of Moon Holdings, LLC, requesting a construction permit authorizing 1) a change in class from B1 to C2 and 2) a move from its present site to a new site on Blue Mountain.

This application proposes the continued use of FM channel 263 (100.5 MHz) but with an effective radiated power of 1.96 kW at a height above average terrain of 627.6 meters, corresponding to 50 kilowatts at 150 meters which is the maximum effective radiated power for this class of station.

This application meets all the rules pertaining to compliance with 47 C.F.R. Section §73.207 for spacing and 47 C.F.R. Section §73.215 for contour protection

This application does not technically meets the requirements of 47 C.F.R. Section §73.315(a) for signal strength when employing the methodology found in 47 C.F.R. Section §73.313. However, as demonstrated herein, using FCC accepted contour prediction methodology found in the National Bureau of Standards Technical Note 101 and the FCC's own PTP signal strength prediction program, the requisite 70 dBu signal is placed of the instant city of license, Porterville.

This engineering report complies in all other respects with the pertinent sections of the FCC rules.

**LIEBERMAN & WALISKO**  
*CONSULTING TELECOMMUNICATIONS ENGINEERS*  
701 YEATMAN PARKWAY  
SILVER SPRING, MD 20902

---

KMQA - Porterville, CA

**II RESPONSE TO FCC FORM 301**

Paragraph 3:

The coordinates shown herein are for a site that meets the requirements set forth in 47 C.F.R. Section §73.215(e). The site is also shown in the map titled Eng. Ex. I, attached hereto.

Paragraph 4:

The coordinates shown herein are for a fully spaced site that meets the requirements of 47 C.F.R. Section §73.207. This is a buildable site as required by the rules and is depicted in Eng. Ex. II, attached hereto.

Paragraph 5:

The tower to be used is of minimal height (less than 200' AGL) and shares land space with other towers at this location. As such, notice to the FAA was deemed unnecessary.

Paragraph 12:

In order to protect first adjacent channel licensee KHAY, the instant application proposes the employment of a directional FM radiator. The idealized pattern for this antenna is shown in Eng. Ex III and the supporting tabulation of antenna pattern data is shown in Eng. Ex. IV. The pattern also complies with 47 C.F.R. Section §73.317(b)(1) and (b)(2).

Paragraph 13:

The instant application continues the use of FM channel 263 at E. Porterville, CA

**LIEBERMAN & WALISKO**  
*CONSULTING TELECOMMUNICATIONS ENGINEERS*  
701 YEATMAN PARKWAY  
SILVER SPRING, MD 20902

---

KQMA - Porterville, CA

**II RESPONSE TO FCC FORM 301 (Cont'd)**

Paragraph 14:

Eng. Exs. V-A, V-B, and V-C are path profiles for free space propagation from the instant proposed site to sites on the far side of Porterville. Utilizing the free space formulas for each of these paths, it is demonstrated a minimum of 70 dBu will obtain over Porterville.

Eng. Ex. V-D is a computation of the free space paths over Porterville utilizing the methodology in the National Bureau of Standards Technical Note 101.

In addition, Eng. Exs. VI-A, VI-B, and VI-C, which are PTP plots of the same radials, are included to also demonstrate compliance with 47 C.F.R. Section §73.315(a) and (b) for 70 dBu coverage of Porterville.

Eng. Ex. VI-E is a map showing the 70 dBu contour constructed using the FCC (F50,50) curves and the 70 dBu contour using the Free Space Formula. Eng. Ex. VI-F is a map showing the locations of the sample points on the far side of Porterville.

Paragraph 16:

Eng. Ex. VII is a frequency search that demonstrates the instant proposed operation could operate from the one-step site for class increase as required by § C.F.R. Section §73.207.

Eng. Ex. VIII is a frequency search under 47 C.F.R. Section §73.215 to show compliance of the instant proposed site with the spacing requirements of that section, and Eng. Ex. IX is a plot of the clearance between the pertinent contours of the instant proposed KQMA and first adjacent station KHAY.

**LIEBERMAN & WALISKO**  
*CONSULTING TELECOMMUNICATIONS ENGINEERS*  
701 YEATMAN PARKWAY  
SILVER SPRING, MD 20902

---

KQMA - Porterville, CA

**II RESPONSE TO FCC FORM 301 (Cont'd)**

Paragraph 17:

The proposed construction will have no significant environmental impact and any FCC action with regard to this application would be categorically exempt from environmental processing under 47 C.F.R. Section §1.1306 of the rules. The instant proposed transmitter site is also used for microwave relay towers and does not fall into any of the categories specified in 47 C.F.R. Section §1.307(a) of the rules. High intensity obstruction lighting is currently not in use nor contemplated.

Calculation performed in Eng. Ex. X using the procedures found in OST Bulletin #65 ANSI guidelines show that the theoretical "worst case" radio frequency radiation produced by the proposed operation would not exceed the limits of radio frequency protection guidelines contained in the ANSI standard (American National Standard Safety Levels With respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz). These "worst case" calculations assume an isotropic radiating source. Actual field strength values decrease significantly at elevation angles substantially below the horizon.

Utilizing the procedures found in the OST Bulletin, the level at which the ANSI maximum allowable radiation limit of 0.2 mW/cm<sup>2</sup> for the instant proposed operation would be found is at 7.67 meters below the antenna. At 2 meters above the ground, the radiation value would be 0.0574 mW/cm<sup>2</sup> which is well below the ANSI maximum standard. In the event worker access to the tower is required, power to the antenna will be removed when the climber reaches 25.18 feet below the antenna.

**LIEBERMAN & WALISKO**  
*CONSULTING TELECOMMUNICATIONS ENGINEERS*  
701 YEATMAN PARKWAY  
SILVER SPRING, MD 20902

---

KQMA - Porterville, CA

**II RESPONSE TO FCC FORM 301 (Cont'd)**

The site itself has restricted access because of the presence of the multiple microwave antennas found there. As such, the general public does not have access.

**III METHODS EMPLOYED**

All data and computations contained herein or upon which this engineering report is based are in complete accord with the pertinent sections of the FCC rules unless otherwise specifically so stated.