

**AMENDMENT TO ENGINEERING EXHIBIT**  
**APPLICATION FOR MODIFICATION OF CONSTRUCTION**  
**PERMIT OF KMOA, MOAPA, NEVADA**

**FCC Facility Number 164097**

**November, 2007**

**Engineering Statement**

This amendment was prepared on behalf of Aurora Media, LLC to amend a pending minor modification application. The pending minor modification application (BMPH-20071119AJQ) proposes to change the un-built construction permit (BMPH-20070119AIH) of KMOA-Moapa, Nevada (FacID=164097), and was filed to move the permitted KMOA operation from the community antenna at the permitted transmitter site to an independent antenna on the same tower. This amendment to the pending minor modification application is necessary because the proposed operations of KMOA will again be from the community antenna as specified in the underlying construction permit (BMPH-20070119AIH), but the Height Above Average Terrain and the Effective Radiated Power are being changed to conform with the other users of the community antenna. This engineering exhibit replaces the engineering exhibit filed in BMPH-20071119AJQ.

This amendment proposes to operate with the following parameters:

Channel:	233
Class:	C
Antenna Coordinates:	36n38'7" by 114w07'18" (NAD27)
ASRN:	Not Applicable
Tower Height AGL:	60.7 M
COR AMSL:	1755 M
COR AGL:	51 M
COR HAAT:	637 M (calculated using 360 evenly spaced terrain profiles)
ERP:	93 kW Horizontal Only
Directional Antenna:	No

### **Exhibit 23**

#### **Allotment**

At the grant of Construction Permit BMPH-20070119AIH, the allotment of 233C was modified from Caliente, NV to Moapa, NV. This Minor Modification Application is for a change in parameters for the facility allotted to Moapa, NV and is in compliance with 47CFR73.203.

### **Exhibit 24**

#### **Community Coverage**

Figure 1 demonstrates that, based on the requested Height Above Average Terrain and Effective Radiated Power, the 70 dBu (3.16 mV/m) contour completely encompasses the proposed community of license, Moapa, Nevada in compliance with 47CFR73.315.

### **Exhibit 25**

#### **Main Studio Location**

The applicant is aware of the requirements of 47 CFR 73.1125 and the applicant will operate his main studio as required by this rule.

### **Exhibit 26**

#### **Interference**

As shown below, the requested facilities are fully spaced under 47CFR73.207 to all stations except the current KFLG, Big River, California operation. The Construction Permit that is the subject of this minor modification was part of a contingent application set with KFLG, Big River, California (BPH-20070119AIE). The proposed operation is fully spaced to the KFLG facilities as specified in the current KFLG construction permit.

The applicant is herein requesting that the Special Operating Conditions or Restrictions Number 1 that was part of BMPH-20070119AIH be attached to the proposed modified Construction Permit.

**KMOA-Moapa, NV**  
 \*\*\*\*\* **FM Channel Spacing Study from CDBS** \*\*\*\*\*  
**Sorted by Distance**

CDBS Database Date Nov 14, 2007

Use pre-1989 Class A Spacings: NO

All distances are in km, all bearings are in degrees referenced to true North.

Proposed Coordinates: 36°N 38' 7'' X 114°W 7' 18''

Proposed Channel: 233C [94.5 MHz]

CH	Call	CDBS#	State-City	Status	Vector	Req.	Result	
233C	KMOA	1170394	NV-MOAPA	FM-CP MOD	0.0<0.0°	290.0	-290	Short
	Underlying CP of this application							
234C	KFLG-FM	1052248	AZ-KINGMAN	FM-LIC	170.4<172.8°	241.0	-70.6	Short
	See Text Above.							
231C	KMXB	603043	NV-HENDERSON	FM-LIC	105.5<228.9°	105.0	0.5	Close
234C0	KFLG-FM	1185133	CA-BIG RIVER	FM-CP	231.3<181.6°	220.0	11.3	Clear
235C1	KCIN	1194626	UT-CEDAR CITY	FM-CP	130.3<30.4°	105.0	25.3	Clear
233C	----	709649	UT-SALINA	FA-VAC	318.5<37.9°	290.0	28.5	Clear
235C1	KCIN	130963	UT-CEDAR CITY	FM-LIC	154.5<35.4°	105.0	49.5	Clear
232C3	KDDL	1009722	AZ-CHINO VALLEY	FM-LIC	245.0<144.7°	176.0	69	Clear
286C2	KQRT	189898	NV-LAS VEGAS	FM-LIC	116.0<253.5°	35.0	81	Clear
286C2	KQRT	1154112	NV-LAS VEGAS	FM-CP	116.0<253.5°	35.0	81	Clear
236A	KNYE	587253	NV-PAHRUMP	FM-LIC	178.4<254.7°	95.0	83.4	Clear

\*\*\*\*\* **End of Channel 233C Spacing Study** \*\*\*\*\*

## Exhibit 31

### Environmental Protection Considerations

The proposed facility is located at a new common FM broadcast transmitter site. The developer and landlord have completed all the required environmental studies for demonstration that the proposed site does not adversely affect the environment. This site has previously been accepted by the FCC as having no significant effect on the environment in connection with the issuance of the Construction Permit to KMOA (BMPH-20070119AIH), KADD (BPH-20050124AIV) and to KZHK (BPH-20050404AED).

The proposed community antenna system for this site is a 10 bay three around Shively Labs ½ wave spaced horizontal only panel antenna and initially will host three or four FM stations operating at 93 kW ERP horizontal only. The manufacturer and the developer have made appropriate protection of the site from the effects of non-ionizing radiation (NIR) part of the antenna system design. The ground level power density of this antenna operating with four proposed stations at full power is modeled using the FCC-OET FM Model selecting the Shively 6810 as the antenna type as recommended by

Shively Labs. The results are shown below in Figure 2. The modeling demonstrates that the maximum power density is less than  $21 \mu\text{W}/\text{cm}^2$ , which is below the maximum permissible level for general population/uncontrolled environment of  $200 \mu\text{W}/\text{cm}^2$ .

The licensee acknowledges his responsibility to cooperate with all users of the site to prevent exposure of anyone to NIR in excess of the levels prescribed by the 47CFR1.1310, and will operate in a manner and cooperate with all users to protect all persons from excessive NIR exposure.

Based on the representation of the site developer and the non-ionizing radiation study herein, the applicant believes that this site will not have a significant impact on the environment as defined in 47 CFR 1.1307 and is categorically excluded from environmental processing per 47 CFR 1306(a).

### **Certification**

This engineering exhibit was prepared by the undersigned acting as a technical consultant for Aurora Media, LLC and was based in part on information provided by the common transmitter site's technical management to all common users of the site. The engineering exhibit is true and correct to the best of undersigned's knowledge and belief.

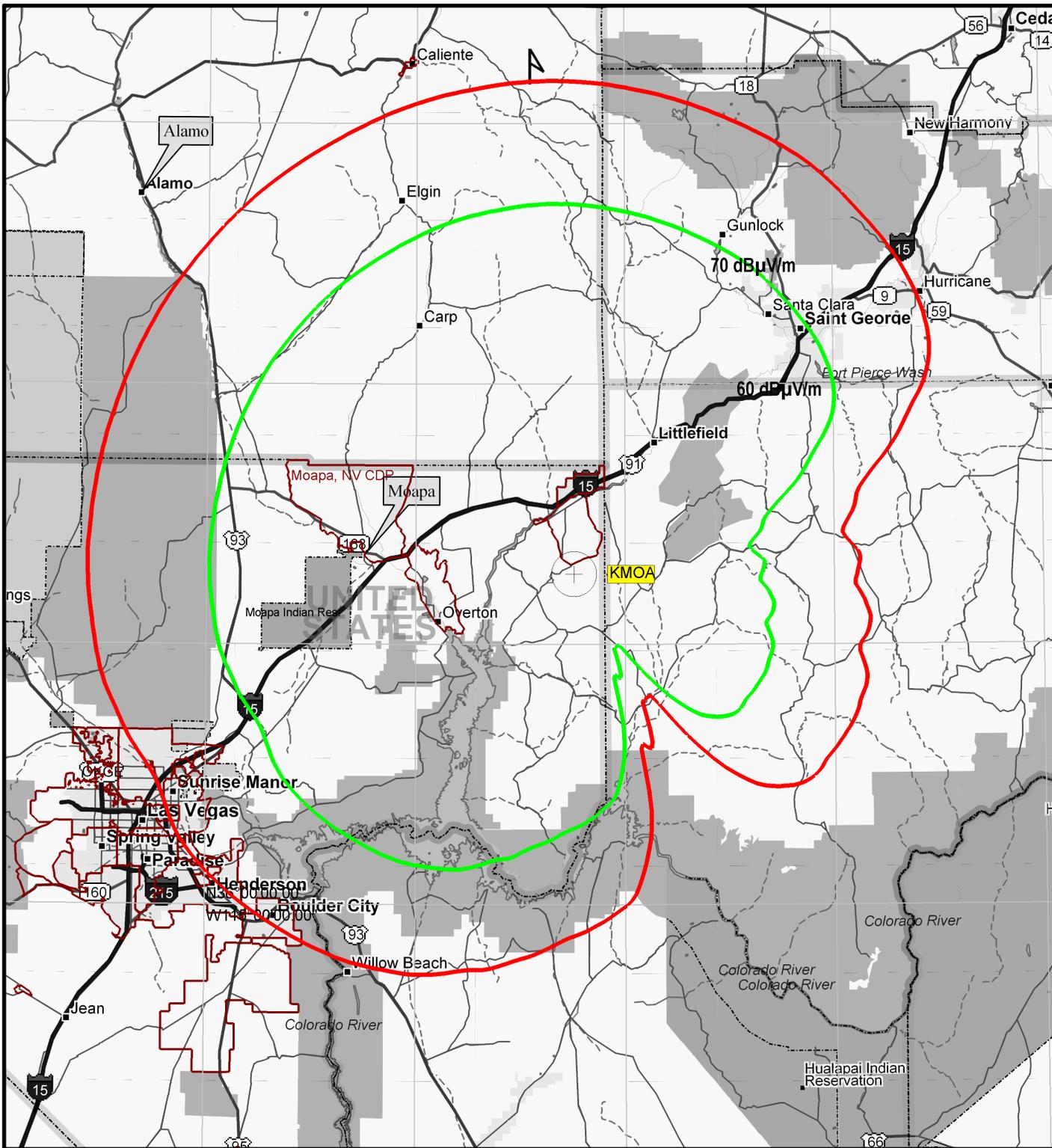
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SIGNAL™: KMOA-11-2007-301-amendment

Prop. model: FCC-FCC  
 Time: 50.0% Loc.: 50.0%  
 Prediction Confidence Margin: 0.0dB  
 Climate: Continental Temperate  
 Land use (clutter): none  
 Atmospheric Abs.: none  
 K Factor: 1.333  
 RX Antenna - Type: OMNI  
 Height: 9.1 m AGL Gain: 0.00 dBd

Field strength at remote

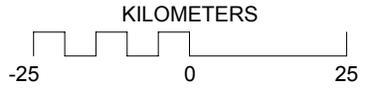
- █ = 70.0 dBuV/m
- █ = 60.0 dBuV/m

Display threshold level: -120.0 dBmW

Sites

Site: KMOA  
 N36°38'07.00" W114°07'18.00" 1704.0 m  
 KMOA1 Tx.Ht.AGL: 51.0 m Total ERPd: 93.00 kW  
 Model: 1 omni-horizontal/0.0° 94.5000 MHz  
 Model: 1 omni-horizontal/0.0° 94.5000 MHz

- Reference Grid (spacing: 30')
- Nevada CDP



**KMOA Minor Modification Application**  
 FCC Coverage Map

Figure 1

November 1007

