

# ENGINEERING EXHIBIT

## Application for Modification of Construction Permit

prepared for

**Mountain Licenses, L.P.**  
KCYU-LP Yakima, Washington  
Facility ID 58694  
Ch. 41 25.4 kW

### Table of Contents

FCC Form 346, Section III - Engineering

#### Exhibit 6

|             |   |
|-------------|---|
| Statement A | Allocation Considerations - Interference Analysis |
| Table 1     | OET 69 Interference Analysis Results Summary      |

#### Exhibit 7

|             |                              |
|-------------|------------------------------|
| Statement B | Environmental Considerations |
|-------------|------------------------------|

*This material supplies a "hard copy" of the engineering portions of this application as entered October 3, 2003 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's name and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.*

**SECTION III - ENGINEERING DATA****TECHNICAL SPECIFICATIONS**

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

**TECH BOX**

|           |  |           |         |       |         |
|-----------|--|-----------|---------|-------|---------|
| 1.        | Channel Number:<br>41  |           |         |       |         |
| 2.        | Frequency Offset: <input checked="" type="radio"/> No offset <input type="radio"/> Zero offset <input type="radio"/> Plus offset <input type="radio"/> Minus offset  |           |         |       |         |
| 3.        | Translator Input Channel No. :   |           |         |       |         |
| 4.        | Primary station proposed to be rebroadcast:<br><table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Call Sign</td> <td style="width: 25%;">City</td> <td style="width: 25%;">State</td> <td style="width: 25%;">Channel</td> </tr> </table>   | Call Sign | City    | State | Channel |
| Call Sign | City   | State     | Channel |       |         |
| 5.        | Antenna Location Coordinates: (NAD 27)<br>Latitude:<br>Degrees 46 Minutes 31 Seconds 57 <input checked="" type="radio"/> North <input type="radio"/> South<br><br>Longitude:<br>Degrees 120 Minutes 30 Seconds 37 <input checked="" type="radio"/> West <input type="radio"/> East   |           |         |       |         |
| 6.        | Antenna Structure Registration Number: 1235050<br><input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA   |           |         |       |         |
| 7.        | Antenna Location Site Elevation Above Mean Sea Level: 602 meters   |           |         |       |         |
| 8.        | Overall Tower Height Above Ground Level: 15.2 meters   |           |         |       |         |
| 9.        | Height of Radiation Center Above Ground Level: 12.1 meters   |           |         |       |         |
| 10.       | Maximum Effective Radiated Power (ERP) Towards Radio Horizon: 25.4 kW  |           |         |       |         |
| 11.       | Maximum ERP in any Horizontal and Vertical Angle: 25.4 kW  |           |         |       |         |
| 12.       | Transmitting Antenna:<br>Before selecting Directional "Off-the-Shelf", refer to "Search for Antenna Information" under <a href="http://svartifoss2.fcc.gov/prod/cdbspubacc/prod/cdbsp_a.htm">CDBS Public Access</a> (http://svartifoss2.fcc.gov/prod/cdbspubacc/prod/cdbsp_a.htm). Make sure that the Standard Pattern is marked Yes and that the relative field values shown match your values. Enter the Manufacturer (Make) and Model exactly as displayed in the Antenna Search.<br><input type="radio"/> Nondirectional <input checked="" type="radio"/> Directional "Off-the-shelf" <input type="radio"/> Directional composite<br><br>Manufacturer SCA Model SL-8 |           |         |       |         |

|  |       |         |       |         |       |         |       |         |       |         |       |
|--|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| Directional Antenna Relative Field Values: <input checked="" type="checkbox"/> N/A (Nondirectional or Directional "Off-the-shelf") |       |         |       |         |       |         |       |         |       |         |       |
| Rotation (Degrees): <input checked="" type="checkbox"/> No Rotation  |       |         |       |         |       |         |       |         |       |         |       |
| Degrees  | Value | Degrees | Value | Degrees | Value | Degrees | Value | Degrees | Value | Degrees | Value |
| 0  |       | 10      |       | 20      |       | 30      |       | 40      |       | 50      |       |
| 60   |       | 70      |       | 80      |       | 90      |       | 100     |       | 110     |       |
| 120  |       | 130     |       | 140     |       | 150     |       | 160     |       | 170     |       |
| 180  |       | 190     |       | 200     |       | 210     |       | 220     |       | 230     |       |
| 240  |       | 250     |       | 260     |       | 270     |       | 280     |       | 290     |       |
| 300  |       | 310     |       | 320     |       | 330     |       | 340     |       | 350     |       |
| Additional Azimuths  |       |         |       |         |       |         |       |         |       |         |       |

**Relative Field Polar Plot**

**NOTE:** In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

**CERTIFICATION**

|     |   |   |
|-----|---|---|
| 13. | Interference : The proposed facility complies with all of the following applicable rule sections. | <input checked="" type="radio"/> Yes <input type="radio"/> No |
|-----|---|---|

|  |   |  |
|--|---|--|
| Check all those that apply.  |   | See Explanation in<br>[Exhibit 6]  |
| <b>TV broadcast analog system protection.</b><br>a. <input checked="" type="checkbox"/> 47 C.F.R. Section 74.705             |   |  |
| <b>Digital TV station protection.</b><br>b. <input checked="" type="checkbox"/> 47 C.F.R. Section 74.706                     |   |  |
| <b>Low Power TV and TV translator station protection.</b><br>c. <input checked="" type="checkbox"/> 47 C.F.R. Section 74.707 |   |  |
| 14.  | <b>Environmental Protection Act.</b> The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance, an <b>Exhibit is required.</b><br><br>By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines. | <input checked="" type="radio"/> Yes <input type="radio"/> No<br><br>See Explanation in<br>[Exhibit 7] |
| <b>PREPARERS CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.</b>   |   |  |

### SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

|   |   |   |                          |
|---|---|---|--------------------------|
| Name<br>ROBERT J. CLINTON   |   | Relationship to Applicant (e.g., Consulting Engineer)<br>CONSULTANT |                          |
| Signature   |   | Date<br>10/3/2003   |                          |
| Mailing Address<br>CAVELL, MERTZ, & DAVIS, INC.<br>7839 ASHTON AVENUE |   |   |                          |
| City<br>MANASSAS  | State or Country (if foreign address)<br>VA                 |   | Zip Code<br>20109 - 2883 |
| Telephone Number (include area code)<br>7033929090                    | E-Mail Address (if available)<br>BCLINTON@CMDCONSULTING.COM |   |                          |

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

### Exhibits

#### Exhibit 6

Description: EXHIBIT 6 - STATEMENT A

EXHIBIT 6 - STATEMENT A - NATURE OF THE PROPOSAL - ALLOCATION CONSIDERATIONS

**Attachment 6**

| Description             |
|-------------------------|
| EXHIBIT 6 - STATEMENT A |

---

**Exhibit 7****Description:** EXHIBIT 7 - STATEMENT BEXHIBIT 7 - STATEMENT B - ENVIRONMENTAL CONSIDERATIONS

---

**Attachment 7**

| Description             |
|-------------------------|
| EXHIBIT 7 - STATEMENT B |

---



[Help](#) | [Home](#)

Search returned: 1 matching antenna

## Antenna Search Results

| Antenna Make | Model | Service | Antenna Id | Standard Pattern | Relative Field Values             |
|--------------|-------|---------|------------|------------------|-----------------------------------|
| SCA          | SL-8  | TV      | 16237      | Y                | <a href="#">Click for Details</a> |



[Help](#) | [Home](#)

| Antenna Make                   |      |      |      | Model |      | Service |      | Antenna Id |      |      |      |
|--------------------------------|------|------|------|-------|------|---------|------|------------|------|------|------|
| SCA                            |      |      |      | SL-8  |      | TV      |      | 16237      |      |      |      |
| Antenna relative field values: |      |      |      |       |      |         |      |            |      |      |      |
| 0°                             | 1    | 10°  | 0.99 | 20°   | 0.99 | 30°     | 0.97 | 40°        | 0.94 | 50°  | 0.91 |
| 60°                            | 0.85 | 70°  | 0.78 | 80°   | 0.73 | 90°     | 0.68 | 100°       | 0.66 | 110° | 0.65 |
| 120°                           | 0.65 | 130° | 0.66 | 140°  | 0.68 | 150°    | 0.69 | 160°       | 0.7  | 170° | 0.71 |
| 180°                           | 0.72 | 190° | 0.7  | 200°  | 0.69 | 210°    | 0.67 | 220°       | 0.65 | 230° | 0.64 |
| 240°                           | 0.64 | 250° | 0.65 | 260°  | 0.66 | 270°    | 0.69 | 280°       | 0.74 | 290° | 0.79 |
| 300°                           | 0.85 | 310° | 0.89 | 320°  | 0.93 | 330°    | 0.96 | 340°       | 0.98 | 350° | 0.99 |
| Additional Azimuths:           |      |      |      |       |      |         |      |            |      |      |      |

[Relative Field Polar Plot](#)

Exhibit 7 - Statement B  
**ENVIRONMENTAL CONSIDERATIONS**  
prepared for  
**Mountain Licenses, L.P.**  
KCYU-LP Yakima, Washington  
Facility ID 58694  
Ch. 41 25.4 kW

The instant proposal is not believed to have a significant environmental impact as defined under Section 1.1306 of the Commission's Rules. Consequently, preparation of an Environmental Assessment is not required.

**Nature of The Proposal**

*Mountain Licenses, L.P.*, ("MLLP") proposes herein to modify the Construction Permit for KCYU-LP, LPTV Channel 41, Yakima, Washington (file number BPTTL-19980601YL). The instant proposal herein seeks a minor modification to specify a new transmitter location, a different antenna system, and a slightly higher effective radiated power ("ERP") than that authorized.

The proposed KCYU-LP antenna will be side mounted on an existing structure (Antenna Structure Registration number 1235050) at an existing "tower farm" area atop Ahtanum Ridge. According to information provided by the applicant, no change in the overall antenna supporting structure height is proposed, thus no change in structure lighting or marking is anticipated. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

**Human Exposure to Radiofrequency Radiation**

*MLLP* will participate in a radiofrequency ("RF") electromagnetic field exposure safety program, along with other broadcasters and FCC licensees that utilize the Ahtanum Ridge antenna farm. Following construction of the proposed facility, *MLLP* will commission RF exposure measurements (and/or detailed calculations) to evaluate the level of RF exposure resulting from the KCYU-LP facility. As necessary, based on these results and considering all emitters, appropriate

Exhibit 7 - Statement B  
**ENVIRONMENTAL CONSIDERATIONS**  
(Page 2 of 2)

exposure abatement procedures will be established and followed, in order to comply with the Commission's exposure limits. Such abatement procedures may involve the restriction of access to certain areas and/or facility modifications to reduce RF levels.

Considering the post-construction measurement and an appropriate abatement program, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Site access will continue to be restricted and controlled through the use of locked gates, and RF exposure warning signs will continue to be posted.

**Safety of Tower Workers and the General Public**

With respect to worker safety, authorized personnel will be trained and/or supervised as necessary for access to any "controlled" areas. A site exposure policy will be employed protecting maintenance workers from excessive exposure when work must be performed on the tower in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines will be exceeded. On-tower RF exposure measurements may also be undertaken to establish the bounds of safe working areas. *MLLP* will coordinate exposure procedures with all pertinent stations.

**Conclusion**

Based on the preceding, it is believed that the instant proposal may be categorically excluded from environmental processing under Section 1.1306 of the Rules, hence preparation of an Environmental Assessment is not required.