

Exhibit 43 - Statement C  
**ENVIRONMENTAL CONSIDERATIONS**  
prepared for  
**Multimedia Holdings Corporation**  
KNAZ-DT Flagstaff, Arizona  
Facility ID 24749  
Ch. 22 885 kW 465 m

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**

*Multimedia Holdings Corporation* ("*Multimedia*") is the permittee of KNAZ-DT, Channel 22, Flagstaff, Arizona (file number BPCDT-19991020ACG) and licensee of the paired analog KNAZ-TV Channel 2 facility (BLCT-19811006KM). The instant proposal will modify the KNAZ-DT construction permit. *Multimedia* proposes herein to locate the KNAZ-DT transmitting antenna on its existing antenna supporting tower structure, presently employed by the "paired" KNAZ-TV NTSC Channel 2 facility. This antenna supporting structure is located on Mormon Mountain, a developed multi-user communications site.

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. No change in overall structure height is proposed, thus no change in current structure marking and lighting requirements is anticipated. 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**

The proposed operation was evaluated for human exposure to radiofrequency energy using the procedures outlined in the Commission's OET Bulletin No. 65 ("OET 65"). OET 65 describes a means of determining whether a proposed facility exceeds the radiofrequency exposure guidelines adopted in §1.1310. Under present Commission policy, a facility may be presumed to comply with the limits specified in §1.1310 if it satisfies the exposure criteria set forth in OET 65. Based upon

Exhibit 43 - Statement C  
**ENVIRONMENTAL CONSIDERATIONS**  
(page 2 of 4)

that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

According to the applicant, access the summit of Mormon Mountain is restricted by a locked gate approximately one mile from the site. Additionally, the KNAZ-TV tower is located within a fenced compound, and warning signs are posted. Only authorized and trained personnel are permitted past the locked gate (one mile distant). Further, the remote location and steep terrain serves to discourage and restrict casual access to the mountaintop site area. However, the applicant advises that there are hiking trails nearby and hikers are known to pass near the site vicinity. The “controlled /occupational” limit specified in §1.1310 for Channel 22 (center frequency 521 MHz) is 1737  $\mu\text{W}/\text{cm}^2$ ; the corresponding “uncontrolled / general population” limit is 347.3  $\mu\text{W}/\text{cm}^2$ .

OET-65's formula for television transmitting antennas is based on the NTSC transmission standards, where the average power is normally much less than the peak power. For the DTV facility in the instant proposal, the peak-to-average ratio is different than the NTSC ratio. The DTV ERP figure herein refers to the *average* power level. The formula used for calculating DTV signal density in this analysis is essentially the same as equation (9) in OET-65.

$$S = (33.4098) (F^2) (ERP) / D^2$$

.Where:     *S*                     =             power density in microwatts/cm<sup>2</sup>  
              *ERP*                 =             total (average) ERP in Watts  
              *F*                     =             relative field factor  
              *D*                     =             distance in meters

The KNAZ-DT antenna will be installed such that its center of radiation is 52.5 meters above ground level. An effective radiated power (“ERP”) of 885 kilowatts, horizontally polarized, will be employed. Considering the vertical plane pattern (see **Exhibit 40, Figure 2**) of the proposed antenna system, and employing the formula referenced above, calculated RF density levels at points 2 meters above ground level attributable to the proposed KNAZ-DT facility will reach a maximum of 39.5 percent of the “uncontrolled / general public” Maximum Permissible Exposure (“MPE”) limit and 7.9 percent of the “controlled / occupational” MPE limit at ground level locations on Mormon Mountain.

Exhibit 43 - Statement C  
**ENVIRONMENTAL CONSIDERATIONS**  
(page 3 of 4)

*Multimedia* will participate in an RF exposure safety program, along with other broadcasters and FCC licensees that utilize the Mormon Mountain site antenna farm. Following construction of the KNAZ-DT facility, *Multimedia* will commission RF exposure measurements (and/or additional, detailed calculations) to evaluate the level of RF exposure resulting from the proposed facility. As necessary, based on these results and considering all emitters, appropriate exposure abatement procedures will be established and followed. 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.

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. *Multimedia* will coordinate exposure procedures with all pertinent stations.

Exhibit 43 - Statement C  
**ENVIRONMENTAL CONSIDERATIONS**  
(page 4 of 4)

**Conclusion**

Based on the preceding, it is believed that the instant proposal will comply with the Commission's requirements regarding human exposure to RF electromagnetic field. 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.

Exhibit 43 Statement C:  
prepared May 31, 2002 by  
Mark B. Peabody,  
Cavell, Mertz & Davis, Inc.  
7839 Ashton Avenue  
Manassas, VA 20109  
703-392-9090

# ENGINEERING EXHIBIT

## Application for Modification of Digital Television Station Construction Permit

prepared for

**Multimedia Holdings Corporation**  
KNAZ-DT Flagstaff, Arizona

Facility ID 24749  
Ch. 22 885 kW 465 m

### Table of Contents

FCC Form 301, Section III-D

#### Exhibit 40

|              |  |
|--------------|--|
| Statement A  | Proposed Antenna System                    |
| Figure 1     | Antenna Horizontal Plane Radiation Pattern |
| Figure 2, 2A | Antenna Vertical (Elevation) Plane Pattern |

#### Exhibit 41

|             |                           |
|-------------|---------------------------|
| Statement B | Allocation Considerations |
|-------------|---------------------------|

#### Exhibit 43

|             |                              |
|-------------|------------------------------|
| Statement C | Environmental Considerations |
|-------------|------------------------------|

*This material supplies a "hard copy" of the engineering portions of this application as entered May 31, 2002 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-D - DTV ENGINEERING DATA**

**Complete Questions 1-5 of the Certification Checklist and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.**

**Certification Checklist:** A correct answer of "Yes" to all of the questions below will ensure an expeditious grant of a construction permit. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

|  |   |
|--|---|
| 1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:   |   |
| (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622.  | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| (b) It will operate from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this location as established in 47 C.F.R. Section 73.622.  | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| (c) It will operate with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622.  | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| 2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307.<br>Applicant must <b>submit the Exhibit</b> called for in Item 13.  | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| 3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community.  | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| 4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable.  | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| 5. The antenna structure to be used by this facility has been registered by the Commission and will not require registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. | <input checked="" type="radio"/> Yes <input type="radio"/> No |

**SECTION III-D - DTV Engineering**

**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>DTV 22 Analog TV, if any 2   |
| 2.  | Zone:<br>I <input type="radio"/> II <input checked="" type="radio"/> III <input type="radio"/>  |
| 3.  | Antenna Location Coordinates: (NAD 27)<br>Latitude:<br>Degrees 34 Minutes 58 Seconds 6 <input checked="" type="radio"/> North <input type="radio"/> South<br>Longitude:<br>Degrees 111 Minutes 30 Seconds 28 <input checked="" type="radio"/> West <input type="radio"/> East |
| 4.  | Antenna Structure Registration Number: 1007647<br><input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA  |
| 5.  | Antenna Location Site Elevation Above Mean Sea Level: 2578.6 meters   |
| 6.  | Overall Tower Height Above Ground Level: 87.7 meters  |
| 7.  | Height of Radiation Center Above Ground Level: 52.5 meters  |
| 8.  | Height of Radiation Center Above Average Terrain : 465.2 meters   |
| 9.  | Maximum Effective Radiated Power : 885 kW   |
| 10. | Antenna Specifications:<br>a. Manufacturer DIE Model TFU-24DSB-B(C)   |

b. Electrical Beam Tilt:  
1.25 degrees  Not Applicable

c. Mechanical Beam Tilt:  
degrees toward azimuth  
degrees True  Not Applicable

Attach as an Exhibit all data specified in 47 C.F.R. Section 73.685.

[Exhibit 39]

d. Polarization:  
 Horizontal  Circular  Elliptical

e. Directional Antenna Relative Field Values:  Not applicable (Nondirectional)

[For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.]  
[Relative Field Values]

**10e. Directional Antenna Relative Field Values**

[Fill in this subform for a composite directional (not off-the-shelf) antenna, only.]

e. Directional Antenna Relative Field Values:

Rotation (Degrees):  No Rotation

| Degrees | Value |
|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| 0       | 0.569 | 10      | 0.571 | 20      | 0.586 | 30      | 0.607 | 40      | 0.627 | 50      | 0.64  |
| 60      | 0.645 | 70      | 0.641 | 80      | 0.631 | 90      | 0.613 | 100     | 0.592 | 110     | 0.579 |
| 120     | 0.57  | 130     | 0.579 | 140     | 0.61  | 150     | 0.65  | 160     | 0.699 | 170     | 0.759 |
| 180     | 0.817 | 190     | 0.869 | 200     | 0.914 | 210     | 0.951 | 220     | 0.975 | 230     | 0.993 |
| 240     | 1     | 250     | 0.996 | 260     | 0.981 | 270     | 0.955 | 280     | 0.92  | 290     | 0.876 |
| 300     | 0.826 | 310     | 0.771 | 320     | 0.714 | 330     | 0.661 | 340     | 0.615 | 350     | 0.583 |

Additional Azimuths

If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied.  
**Exhibit required.**

[Exhibit 40]

11. Does the proposed facility satisfy the interference protection provisions of 47 C.F.R. Section 73.623(a)? (Applicable only if **Certification Checklist** items 1(a), (b), or (c) are answered "No".)  Yes  No

If No, attach as an Exhibit justification therefore, including a summary of any previously granted waivers.

[Exhibit 41]

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if **Certification Checklist** item 3 is answered "No".) [Exhibit 42]

13. **Environmental Protection Act. Submit in an Exhibit** the following: [Exhibit 43]

If **Certification Checklist** Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to **Certification Checklist** Item 2, 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.

If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R. Section 1.1311.

**PREPARERS CERTIFICATION ON SECTION III MUST BE COMPLETED AND SIGNED.**

**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>MARK PEABODY  |  | Relationship to Applicant (e.g., Consulting Engineer)<br>CONSULTANT |                     |
| Signature   |  | Date<br>5/31/2002   |                     |
| 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 - |
| Telephone Number (include area code)<br>7033929090                  |  | E-Mail Address (if available)<br>MPEABODY@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**

**Attachment 39**

**Exhibit 40**

**Description:** EXHIBIT 40 - NATURE OF APPLICATION AND PROPOSED ANTENNA SYSTEM

ATTACHED AS EXHIBIT 40

**Attachment 40**

| Description   | Type               | Conversion |      |
|---|--------------------|------------|------|
|   |                    | Status     | File |
| <a href="#">Exhibit 40 - Nature of Proposal and Proposed Antenna System</a> | Adobe Acrobat File | not needed | PDF  |

**Exhibit 41**

**Description:** EXHIBIT 41 - ALLOCATION CONSIDERATIONS

ATTACHED AS EXHIBIT 41

**Attachment 41**

| Description   | Type               | Conversion |      |
|---|--------------------|------------|------|
|   |                    | Status     | File |
| <a href="#">Exhibit 41 - Allocations Considerations</a> | Adobe Acrobat File | not needed | PDF  |

**Attachment 42**

**Exhibit 43**

**Description:** EXHIBIT 43 - ENVIRONMENTAL CONSIDERATIONS

**Attachment 43**

| Description   | Type               | Conversion |      |
|---|--------------------|------------|------|
|   |                    | Status     | File |
| <a href="#">Exhibit 43 - Environmental Considerations</a> | Adobe Acrobat File | not needed | PDF  |