

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF
CONSTRUCTION PERMIT
LPTV STATION WVQS-LP (FACILITY ID 32144)
ISABEL SEGUNDA, PUERTO RICO
CH 50 15 KW (MAX-DA)

Engineering Statement

This Technical Exhibit supports an application for modification of construction permit for station WVQS-LP. Station WVQS-LP has a construction permit (BDFCDTL-20080428ACH) to flash-cut that due to denial by the US Forrester Service (US Department of Agriculture) of the necessary permits for the installation of the antenna system has not been built (see US Forrester Service letter in Appendix 1). Permits for the antenna system installation have been obtained for a nearby site, located 300 meters from the CP site.

Post-transition OET-69 studies for the facilities proposed from this new site show interference levels exceeding FCC standards but lower than the post-transition interference levels predicted for the existing CP facilities. The applicant has reached an agreement with the affected station, WQHA, accepting a change in the WVQS-LP facilities, as long as the interference level predicted from the existing CP facilities is not exceeded (see Letter of Agreement in Appendix 2). The post-transition interference level predicted to station WQHA for the proposed facilities is less than the post-transition interference level predicted for the current CP facilities. The technical parameters used for these OET-69 studies are shown in Appendix 3.

An Antenna Concepts ACS12AR antenna, with a maximum ERP of 15 kW and antenna RCAMSL of 1056 meters are proposed. Figure 1 is a map showing the licensed 74 dBu (analog), the CP 51 dBu digital contour and the proposed 51 dBu digital coverage contours. As shown on the map the licensed analog contour is completely encompassed by the proposed digital contour. Thus, the proposed facilities are deemed to be in compliance with current FCC Rules and practice.

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Notification of FCC Monitoring Station and Arecibo Observatory

FCC rules, Section 73.1030(c), requires that the proposed facility do not produce a field strength greater than 10 mV/m at the FCC stations. The closest FCC monitoring station to the proposed operation is located at Santa Isabel, Puerto Rico, at a distance of 70 kilometers on a bearing of 241° True. The proposed operation will produce field strengths much lower than 10 mV/m at the FCC Santa Isabel, PR station. Therefore, notification to the FCC monitoring station is not deemed necessary.

The Arecibo Observatory located near Arecibo, Puerto Rico was notified of the proposed current CP facilities and consented to the same. As shown in Figure 1, the facilities proposed herein are predicted to radiate a signal whose pattern is essentially unchanged from the facilities authorized in the current CP. As such, a new notification to the Arecibo Observatory is not deemed necessary.

Environmental Considerations

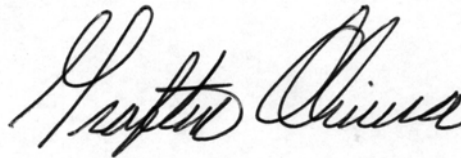
The proposed WVQS-LP digital facilities were evaluated in terms of potential radiofrequency radiation exposure at 2 meters above ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation". The calculated power density at 2 meters above ground level at the base of the tower was calculated using the appropriate equation contained in the Bulletin. As shown on Figure 2 (antenna vertical relative pattern), the maximum vertical relative field for depression angles towards the tower base (-10° to -90°) is less than 0.2. Therefore, using a vertical relative field value of 0.2, a maximum ERP of 15 kilowatts, and an antenna center of radiation height above ground level of 51 meters, the calculated power density at two meters above ground level at the base of the tower is 8.35

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microwatt per square centimeter (uW/cm²), or 1.81 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas (460 uW/cm² for TV channel 50). Therefore, since the RF exposure is predicted not to exceed 5.0% of the FCC limit for uncontrolled environments, the proposal complies with the FCC limits for human exposure to RF radiation and it is categorically excluded from environmental processing. The applicant shall reduce power or cease operation as necessary to protect persons having access to fenced area around the tower from RF energy in excess of the FCC guidelines.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect to control access to the site. In the event that workers or other authorized personnel enter the restricted area appropriate measures shall be taken to limit RF energy exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area. It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

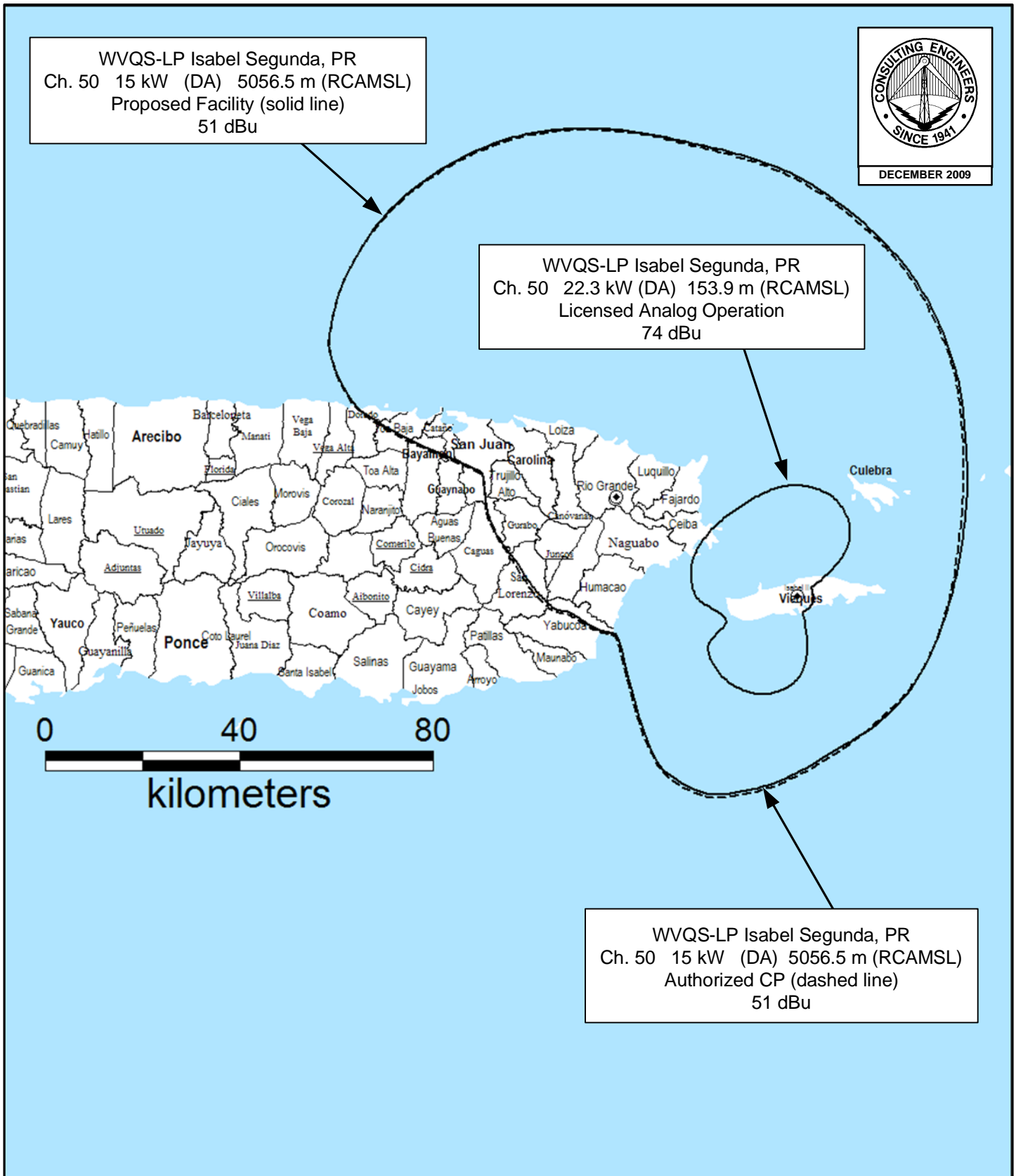


Grafton Olivera, P.E.
Consulting Engineer

du Treil, Lundin & Rackley, Inc.
201 Fletcher Ave.
Sarasota, FL 34237-6019

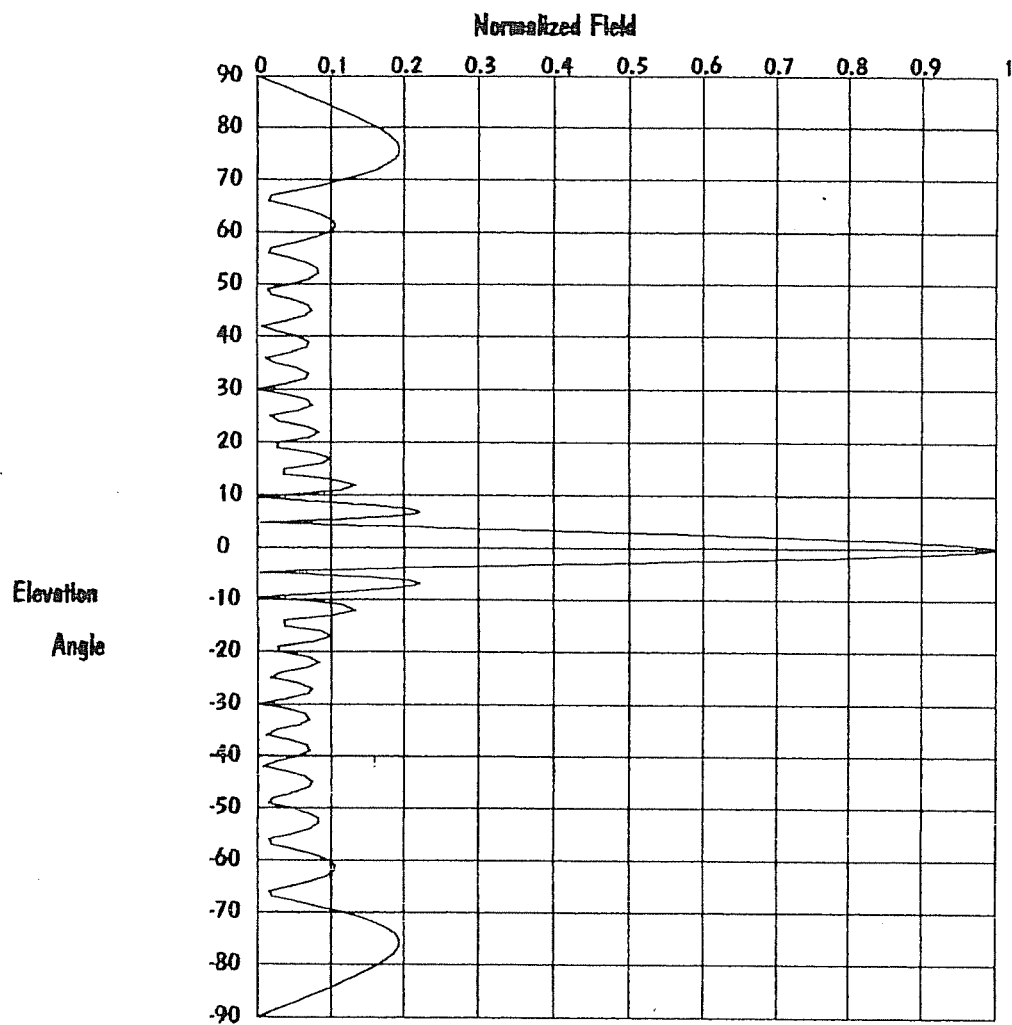
December 10, 2009

Figure 1



FCC PREDICTED COVERAGE CONTOURS
 DIGITAL LPTV STATION WVQS-LD
 ISABEL SEGUNDA, PUERTO RICO
 CH 50 15 KW (MAX-DA) 1056 M (RCAMSL)
 du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



Elevation Pattern

Scale: Linear

Units: Absolute

Antenna Concepts Inc.
CLIENT: *da Trid, London & Rockley, Inc*

Date: 4/13/1998

ANTENNA TYPE: *ACS12 bay Low Power slot*FREQUENCY: *UHF*PATTERN POL.: *Horizontal*

Beam Tilt (Deg.):

Elev. DIRECTIVITY: *13.747/ 11.382dBd*

Null Fill (%):

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Letter from US Forrest Service (US Department of Agriculture)

{2 sheets follow}



File Code: 2720/6640

Date: November 3, 2009

Eng. Juan G. Padin, PE
P.O. Box 142755
Arecibo, PR 00614

Dear Mr. Padin:

This letter is to document discussions during our meeting held on September 30, 2009 at our Forest Service offices and to clarify our position on the WVQS-LP Channel 50 proposal to install DTV equipment at facilities at El Yunque Peak.

The Forest Service considers proposals for equipment at El Yunque Peak electronic site based on criteria established in the Forest Plan and the recently revised El Yunque Peak Communications Site Management Plan. The role of the site plan is to assist us in managing the peak in an environmentally sound manor while supporting reasonable numbers and types of telecommunication uses. The site plan also provides guidelines and establishes zones at the peak to minimize frequency disruptions should equipment be added or changed.

Crown Castle, Inc. one of the facility managers at the peak, approached us in June 2008 with the proposal to install WVQS-LP/Channel 50's DTV equipment at their main facility (#16). Forest Service zoned technical telecommunication specialists reviewed the technical data sheet submitted for this equipment and determined that the frequencies and ERP of the proposed DTV equipment were not compatible with the zone where facility #17 is located and there could be potential to cause frequency interruptions to existing equipment. It was suggested that Channel 50's equipment could possibly be accommodated better in another area on the peak.

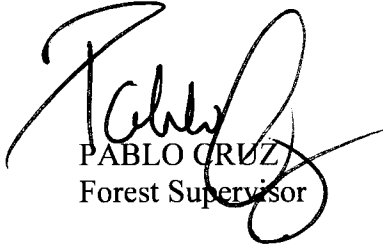
Crown Castle did have another empty facility (#13) located in zone C, the zone which provides for broadcast uses, and were favorable to consider changing the location of the equipment to this other facility. In January 2009 the Forest Service responded to Crown Castle indicating that that we would be supportive of the DTV equipment being installed at facility #13 as long as there would be no construction to the facilities or addition of any new towers.

We understand that Crown Castle and WVQS-LP/Channel 50 conducted studies and determined that the tower structure at facility #13 was adequate to support the DTV antennas. Other facility managers at the peak were notified of the proposal to install equipment at this site and to date no concerns have been expressed regarding this action.



Therefore, the Forest Service would approve the installation of WVQS-LP/Channel 50's DTV equipment in facility #13 as long as no new towers or facilities are constructed or expanded. If you need any further information from our agency on this matter, please contact Carolyn Krupp at 787-888-5616 or by email:ckrupp@fs.fed.us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Pablo Cruz', written over the printed name and title.

PABLO CRUZ
Forest Supervisor

cc:

A. Quiñones, Crown Castle, Inc

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Interference Agreement

{1 sheet follows}

AGREEMENT

JUAN G. PADIN, licensee and applicant of DLPTV station WVQS-LP: channel 50, Isabel Segunda, PR (FCC File No. BSTA-20070718AEX) and CONCILIO MISION CRISTIANA FUENTE DE AGUA VIVA, INC., licensee of WQHA-DT, Channel 50 in Aguada, PR (FCC File No. BPCDT-20080317AEQ), hereby agree to the following:

WVQS-LP has a CP (FCC File No. BSTA-20070718AEX) that using post transition facilities is predicted to cause 5.225% interference to WQHA. WQHA consents to WVQS-LP relocating to a new site within the El Yunque Peak, as long as the newly proposed facility is predicted (using post-transition facilities and the same IX study cell size and L-R distance increment) not to increase the interference level to be caused to WQHA-DT by the WVQS-LP existing CP.


WVQS-LP accepts any interference that may be caused by the facilities of WQHA-DT. Furthermore, WVQS-LP commits to promptly undertake whatever corrective actions are required to eliminate any objectionable interference that may be experienced by WQHA-DT as a result of the facilities constructed by WVQS-LP on the basis of this agreement.

Both parties to this agreement pledge mutual cooperation to quickly resolve any actual objectionable interference problem that may be experienced by WQHA-DT as a result of this agreement.


Signed in Carolina, Puerto Rico on the 23 day of november, 2009:

For WVQS-LP:

For: WQHA-DT (CONCILIO MISION
CRISTIANA FUENTE DE AGUA VIVA, INC.)



JUAN G. PADIN
SOLE OWNER



[NOMBRE] Pastor Otaniel Font
[TITULO] Presidente

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Post-Transition OET-69 Studies Parameters

{2 sheets follow}

Census data selected: 2000

Post DTV Transition Database Selected

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 12-07-2009 Time: 10:51:12

Record Selected for Analysis

WVQS-LP USERRECORD-01 ISABEL SEGUNDA PR US
Channel 50 ERP 15. kW HAAT 857. m RCAMSL 01057 m STRINGENT MASK
Latitude 018-18-45 Longitude 0065-47-35
Status APP Zone 2 Border
Dir Antenna Make CDB Model 00000000086170 Beam tilt N Ref Azimuth 50.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 0.50 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50,90) (km)
0.0	13.537	1021.7	75.6
45.0	14.702	996.8	75.7
90.0	12.422	868.6	71.8
135.0	13.113	729.0	69.6
180.0	0.014	852.0	28.0
225.0	0.013	619.6	24.7
270.0	0.013	759.8	26.7
315.0	10.333	1008.4	73.2

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Census data selected: 2000

Post DTV Transition Database Selected

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 12-07-2009 Time: 11:12:19

Record Selected for Analysis

WVQS-LP USERRECORD-01 ISABEL SEGUNDA PR US
Channel 50 ERP 15. kW HAAT 850. m RCAMSL 01056 m STRINGENT MASK
Latitude 018-18-36 Longitude 0065-47-41
Status APP Zone 2 Border
Dir Antenna Make CDB Model 00000000086170 Beam tilt N Ref Azimuth 50.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 0.50 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50,90) (km)
0.0	13.537	1023.3	75.6
45.0	14.702	983.0	75.4
90.0	12.422	845.0	71.4
135.0	13.113	699.8	69.0
180.0	0.014	858.5	28.0
225.0	0.013	638.7	25.0
270.0	0.013	751.7	26.6
315.0	10.333	1002.2	73.1

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain