

**DELAWDER COMMUNICATIONS, INC.**

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**ENGINEERING REPORT**

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J. B. Salazar  
K47IJ, Uvalde, TX: Site Move Minor Modification

**EXHIBIT 8**

**LPTV MINOR MODIFICATION – INTERFERENCE STUDIES**

1. J. B. Salazar (“Applicant”) is the licensee of K47IJ, Uvalde, TX, analog channel 47. By this analog minor modification application, Applicant proposes a new transmitter site located near Bandera, Texas. K47IJ will continue to operate on channel 47(z) from the new transmitter site.

2. Attached as Figure 1 is a map showing 74 dBu (F50,50) service contour overlap between the licensed and proposed K47IJ facilities. Because there is no proposed channel change, and given that the licensed and proposed service contours overlap, this filing qualifies as a minor modification application.

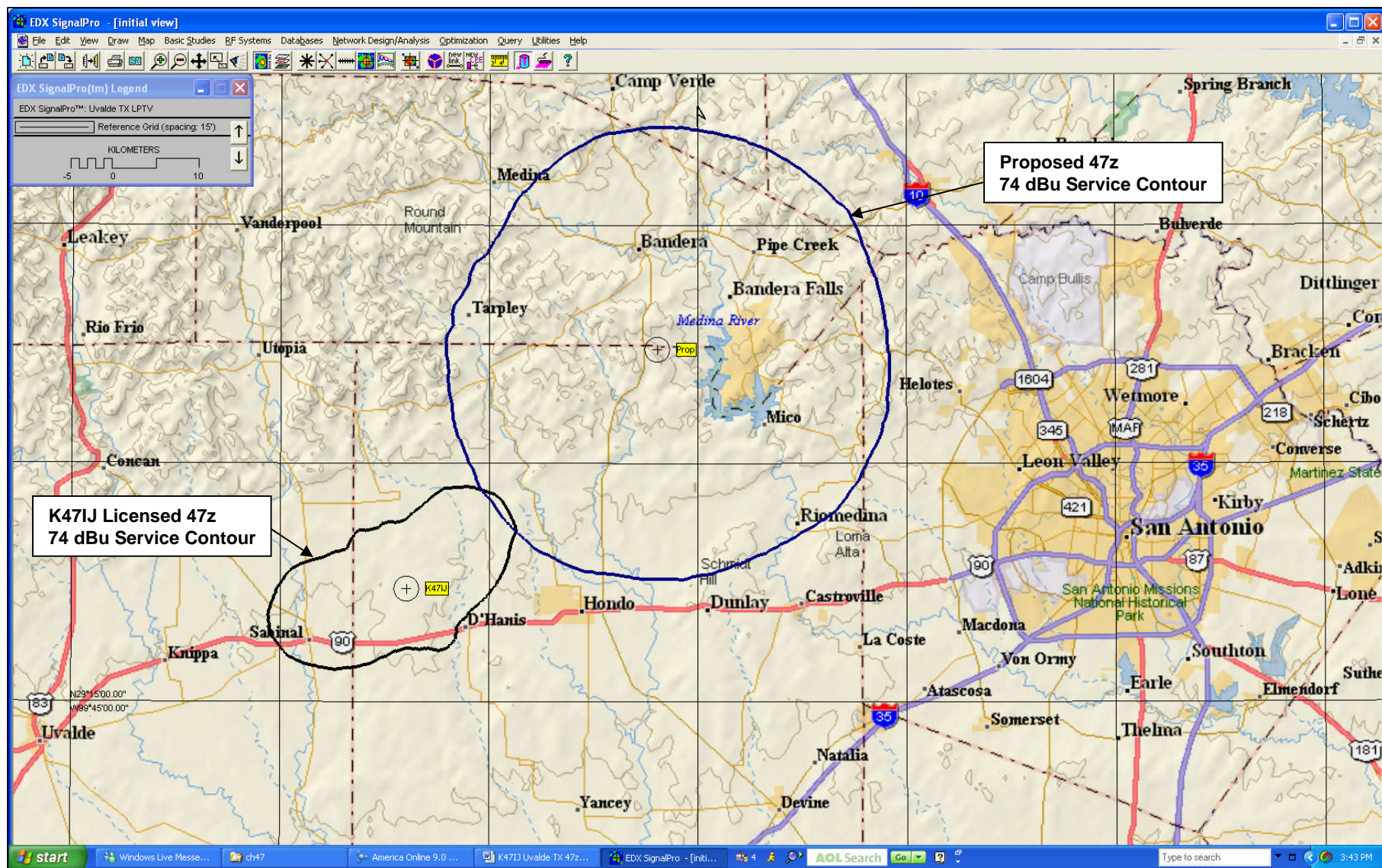
3. The use of zero frequency offset is made in order to add protection to and from any nearby analog co-channel station. The applicant will maintain the requested offset per 47 C.F.R. Section 74.761 by use of a precision oscillator supplied by the transmitter manufacturer.

4. At the proposed ERP of less than 10 kW, this application does not require coordination with Mexico or Canada.

5. Attached as Figure 2 (for the current TV environment) and Figure 3 (for the post-transition environment) are the OET-69 study results for the proposed facility (as the referenced station) as determined on a Sun Computer using a Solaris (Unix-based) operating system and using the same OET-69 software as developed for use by the FCC. (According to the software developer, the program used herein provides identical results as the FCC’s OET-69 processing program.) As demonstrated by Figures 2 and 3, the proposed facility adequately protects all required US broadcast stations as required by the FCC Rules. All studies are conducted in accordance with current FCC Rules and Regulations.

6. The applicant accepts any interference that is predicted to exist to the proposed facility by any licensed, authorized or previously proposed primary TV station. The applicant also accepts any interference that is predicted to exist to the proposed facility by any secondary TV facility that is given preferential status by the FCC over the Applicant’s herein proposed facility.

**FIGURE 1: K47IJ, UVALDE, TX: MAP SHOWING CONTOUR OVERLAP WITH LICENSED FACILITY**



## FIGURE 2 – OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z

### TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 01-08-2009 Time: 08:50:08

Record Selected for Analysis

K47IJ USERRECORD-01 UVALDE TX US  
Channel 47 ERP 9.99 kW HAAT 373. m RCAMSL 00722 m  
Latitude 029-37-11 Longitude 0099-02-56  
Status APP Zone 2 Border Offset Z  
Last update Cutoff date Docket  
Comments  
Applicant

Census data selected: 1990

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	74.0 dBu F(50,50) (km)
0.0	9.990	314.5	25.9
45.0	9.990	347.3	26.9
90.0	9.990	339.9	26.7
135.0	9.990	373.3	27.7
180.0	9.990	342.4	26.8
225.0	9.990	326.4	26.3
270.0	9.990	272.0	24.4
315.0	9.990	248.1	23.5

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is within the Mexican coordination distance

Distance to border = 166.5km

Proposed station is OK toward AM broadcast stations

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## FIGURE 2 – OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z

### Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
47	K47IJ	UVALDE TX	USERRECORD01

### Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
48	KSAT-TV	SAN ANTONIO TX	85.8	LIC	BLCDT -20020408AAE

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### Analysis of Interference to Affected Station 1

#### DTV Baseline Analysis

Channel	Call	City/State	Application Ref. No.
48	KSAT-DT	SAN ANTONIO TX	DTVPLN -DTVP1402

### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
47	KNCT-DT	BELTON TX	200.2	PLN	DTVPLN -DTVP1375
47	KIII-DT	CORPUS CHRISTI TX	190.3	PLN	DTVPLN -DTVP1376
48	KTMD	GALVESTON TX	294.8	PLN	DTVPLN -NPLN1741
48	KHSX-DT	IRVING TX	388.9	PLN	DTVPLN -DTVP1401
48	KNVO	MCALLEN TX	354.1	PLN	DTVPLN -NPLN1742
49	KNVA-DT	AUSTIN TX	125.5	PLN	DTVPLN -DTVP1432

Results for: 48A TX SAN ANTONIO DTVPLN DTVP1402 PLN  
HAAT 451.0 m, ATV ERP 989.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1607825	37223.3
not affected by terrain losses	1600855	36459.2
lost to NTSC IX	8943	88.0
lost to additional IX by ATV	19861	532.0
lost to ATV IX only	21038	556.0
lost to all IX	28804	620.1

#### NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.
12	KSATTV	SAN ANTONIO TX	DTVPLN -NPLN0797

### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
12	KAMU-DT	COLLEGE STATION TX	238.6	PLN	DTVPLN -DTVP0107
12	KTXSTV	SWEETWATER TX	391.4	PLN	DTVPLN -NPLN0799

Results for: 12N TX SAN ANTONIO DTVPLN NPLN0797 PLN

	POPULATION	AREA (sq km)
within Noise Limited Contour	1607828	37223.3
not affected by terrain losses	1570923	34947.1
lost to NTSC IX	212	68.0

## FIGURE 2 – OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z

lost to additional IX by ATV	6382	192.0
lost to all IX	6594	260.0

### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
48	KSAT-TV	SAN ANTONIO TX	BLCDDT	-20020408AAE

### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
47	KNCT-DT	BELTON TX	200.2	PLN	DTVPLN	-DTVP1375
47	KIII-DT	CORPUS CHRISTI TX	190.3	PLN	DTVPLN	-DTVP1376
48	KTMD	GALVESTON TX	268.2	LIC	BLCDDT	-20040325AEO
48	KTMD-DR	GALVESTON TX	268.2	LIC	BPRM	-20020425ABX
48	KSTR-TV	IRVING TX	384.4	LIC	BLCDDT	-20020909AAM
48	KHSX-DT	IRVING TX	388.9	PLN	DTVPLN	-DTVP1401
48	KNVO	MCALLEN TX	354.1	LIC	BLCT	-19961105KE
49	KNVA	AUSTIN TX	125.5	CP	BPCDDT	-20080606AAC
49	KNVA-DT	AUSTIN TX	125.5	PLN	DTVPLN	-DTVP1432
49	KNVA	AUSTIN TX	125.5	LIC	BLCDDT	-20060721ABF
47	K47IJ	UVALDE TX	85.8	APP	USERRECORD-01	

Total scenarios = 6

Result key: 1

Scenario 1 Affected station 1 KSAT-TV

Before Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC  
HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	25	12.0
lost to additional IX by ATV	18778	752.1
lost to ATV IX only	18778	752.1
lost to all IX	18803	764.1

Potential Interfering Stations Included in above Scenario 1

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BLCDDT	20040325AEO	LIC
49A TX AUSTIN	BPCDDT	20080606AAC	CP

After Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC  
HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	116	20.0
lost to additional IX by ATV	18778	752.1
lost to ATV IX only	18778	752.1
lost to all IX	18894	772.1

## FIGURE 2 – OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z

Potential Interfering Stations Included in above Scenario 1

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BLCDDT	20040325AEO	LIC
49A TX AUSTIN	BPCDDT	20080606AAC	CP
47N TX UVALDE	USERRECORD01		APP

Percent new IX = 0.0058%

Result key: 2  
Scenario 2 Affected station 1 KSAT-TV  
Before Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC  
HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	25	12.0
lost to additional IX by ATV	13819	504.0
lost to ATV IX only	13819	504.0
lost to all IX	13844	516.0

Potential Interfering Stations Included in above Scenario 2

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BLCDDT	20040325AEO	LIC
49A TX AUSTIN	DTVPLN	DTVP1432	PLN

After Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC  
HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	116	20.0
lost to additional IX by ATV	13819	504.0
lost to ATV IX only	13819	504.0
lost to all IX	13935	524.0

Potential Interfering Stations Included in above Scenario 2

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BLCDDT	20040325AEO	LIC
49A TX AUSTIN	DTVPLN	DTVP1432	PLN
47N TX UVALDE	USERRECORD01		APP

Percent new IX = 0.0058%

Result key: 3  
Scenario 3 Affected station 1 KSAT-TV  
Before Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC  
HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
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## FIGURE 2 – OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z

within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	25	12.0
lost to additional IX by ATV	15608	556.0
lost to ATV IX only	15608	556.0
lost to all IX	15633	568.0

Potential Interfering Stations Included in above Scenario 3

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BLCDDT	20040325AEO	LIC
49A TX AUSTIN	BLCDDT	20060721ABF	LIC

After Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC  
HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	116	20.0
lost to additional IX by ATV	15608	556.0
lost to ATV IX only	15608	556.0
lost to all IX	15724	576.0

Potential Interfering Stations Included in above Scenario 3

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BLCDDT	20040325AEO	LIC
49A TX AUSTIN	BLCDDT	20060721ABF	LIC
47N TX UVALDE	USERRECORD01		APP

Percent new IX = 0.0058%

Result key: 4  
Scenario 4 Affected station 1 KSAT-TV  
Before Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC  
HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	25	12.0
lost to additional IX by ATV	24504	932.1
lost to ATV IX only	24529	944.1
lost to all IX	24529	944.1

Potential Interfering Stations Included in above Scenario 4

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BPRM	20020425ABX	LIC
49A TX AUSTIN	BPCDDT	20080606AAC	CP

After Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC

## FIGURE 2 – OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z

HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	116	20.0
lost to additional IX by ATV	24504	932.1
lost to ATV IX only	24529	944.1
lost to all IX	24620	952.1

Potential Interfering Stations Included in above Scenario 4

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BPRM	20020425ABX	LIC
49A TX AUSTIN	BPCDT	20080606AAC	CP
47N TX UVALDE	USERRECORD01		APP

Percent new IX = 0.0058%

Result key: 5  
 Scenario 5 Affected station 1 KSAT-TV  
 Before Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC  
 HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	25	12.0
lost to additional IX by ATV	19545	684.1
lost to ATV IX only	19570	696.1
lost to all IX	19570	696.1

Potential Interfering Stations Included in above Scenario 5

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BPRM	20020425ABX	LIC
49A TX AUSTIN	DTVPLN	DTVP1432	PLN

After Analysis

Results for: 48A TX SAN ANTONIO BLCDDT 20020408AAE LIC  
 HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	116	20.0
lost to additional IX by ATV	19545	684.1
lost to ATV IX only	19570	696.1
lost to all IX	19661	704.1

Potential Interfering Stations Included in above Scenario 5

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BPRM	20020425ABX	LIC
49A TX AUSTIN	DTVPLN	DTVP1432	PLN
47N TX UVALDE	USERRECORD01		APP

## FIGURE 2 – OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z

Percent new IX = 0.0058%

Result key: 6  
 Scenario 6 Affected station 1 KSAT-TV  
 Before Analysis

Results for: 48A TX SAN ANTONIO BLCDT 20020408AAE LIC  
 HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	25	12.0
lost to additional IX by ATV	21334	736.1
lost to ATV IX only	21359	748.1
lost to all IX	21359	748.1

Potential Interfering Stations Included in above Scenario 6

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BPRM	20020425ABX	LIC
49A TX AUSTIN	BLCDT	20060721ABF	LIC

After Analysis

Results for: 48A TX SAN ANTONIO BLCDT 20020408AAE LIC  
 HAAT 427.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578668	35743.1
not affected by terrain losses	1571797	35063.0
lost to NTSC IX	116	20.0
lost to additional IX by ATV	21334	736.1
lost to ATV IX only	21359	748.1
lost to all IX	21450	756.1

Potential Interfering Stations Included in above Scenario 6

48N TX MCALLEN	BLCT	19961105KE	LIC
48A TX GALVESTON	BPRM	20020425ABX	LIC
49A TX AUSTIN	BLCDT	20060721ABF	LIC
47N TX UVALDE	USERRECORD01		APP

Percent new IX = 0.0058%

Worst case new IX 0.0058% Scenario 1

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### FIGURE 3 – POST-TRANSITION OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z

Post DTV Transition Database Selected

#### TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 01-08-2009 Time: 08:56:47

Record Selected for Analysis

K47IJ USERRECORD-01 UVALDE TX US  
Channel 47 ERP 9.99 kW HAAT 373. m RCAMSL 00722 m  
Latitude 029-37-11 Longitude 0099-02-56  
Status APP Zone 2 Border Offset Z  
Last update Cutoff date Docket  
Comments  
Applicant

Census data selected: 1990

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	74.0 dBu F(50,50) (km)
0.0	9.990	314.5	25.9
45.0	9.990	347.3	26.9
90.0	9.990	339.9	26.7
135.0	9.990	373.3	27.7
180.0	9.990	342.4	26.8
225.0	9.990	326.4	26.3
270.0	9.990	272.0	24.4
315.0	9.990	248.1	23.5

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is within the Mexican coordination distance  
Distance to border = 166.5km

Proposed station is OK toward AM broadcast stations

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# FIGURE 3 – POST-TRANSITION OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z

## Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
47	K47IJ	UVALDE TX	USERRECORD01

## Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
48	WOAI-TV	SAN ANTONIO TX	85.2	CP	BPCDT	-20080304AAH

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## Analysis of Interference to Affected Station 1

### DTV Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
48	WOAI-TV	SAN ANTONIO TX	DTVPLN	-DTVP1725

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
48	KTMD	GALVESTON TX	268.8	PLN	DTVPLN	-DTVP1723
48	KSTR-TV	IRVING TX	384.6	PLN	DTVPLN	-DTVP1724
49	KNVA	AUSTIN TX	125.7	PLN	DTVPLN	-DTVP1753

Results for: 48A TX SAN ANTONIO DTVPLN DTVP1725 PLN  
HAAT 451.0 m, ATV ERP 843.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1578750	35779.8
not affected by terrain losses	1572277	35199.7
lost to NTSC IX	0	0.0
lost to additional IX by ATV	14427	628.1
lost to ATV IX only	14427	628.1
lost to all IX	14427	628.1

### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
48	WOAI-TV	SAN ANTONIO TX	BPCDT	-20080304AAH

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
48	KTMD	GALVESTON TX	268.8	LIC	BLCDDT	-20040325AEO
48	KTMD	GALVESTON TX	268.8	PLN	DTVPLN	-DTVP1723
48	KSTR-TV	IRVING TX	384.6	CP	BPCDT	-20080618AEK
48	KSTR-TV	IRVING TX	384.6	PLN	DTVPLN	-DTVP1724
48	KSTR-TV	IRVING TX	384.6	LIC	BLCDDT	-20020909AAM
49	KNVA	AUSTIN TX	125.7	LIC	BLCDDT	-20060721ABF
49	KNVA	AUSTIN TX	125.7	PLN	DTVPLN	-DTVP1753
49	KNVA	AUSTIN TX	125.7	CP	BPCDT	-20080606AAC
47	K47IJ	UVALDE TX	85.2	APP	USERRECORD-01	

Proposal causes no interference

**FIGURE 3 – POST-TRANSITION OET-69 SHOWING FOR K47IJ, UVALDE, TX, CH 47z**

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