

TECHNICAL EXHIBIT
IN SUPPORT OF
SPECIAL TEMPORARY AUTHORITY (STA)
STATION KLDO-DT (FAC. 51479)
LAREDO, TEXAS
CH 19 50 KW (MAX-DA) 132 M

Technical Narrative

This Technical Exhibit supports a Special Temporary Authority (STA) request for digital television station KLDO-DT on channel 19 at Laredo, Texas. Station KLDO-DT is authorized (BMPCDT-20060112AEV) to operate on digital channel 19 with a directional antenna maximum effective radiated power (ERP) of 5 kilowatts (kW) and an antenna height above average terrain (HAAT) of 109 meters.

Proposed STA Facilities

The KLDO-DT STA operation proposes a directional antenna maximum ERP of 50 kW at an antenna HAAT of 132 meters. It is proposed to use an ERI ALP8L3-HSBR-19 antenna mounted at the 144.8 meter (475 foot) level on an existing tower structure (ASR 1252424). The proposed antenna radiation center above mean sea level is 289 meters.

Figure 1 is a coverage map for the proposed STA operation. The map indicates that the predicted City-Grade contour will encompass all of the city limits of Laredo (derived from 2000 U.S. Census information for Texas).

Mexican Coordination

KLDO-DT is located 2.5 km east of the US/Mexican border area. Therefore, coordination of the proposal with Mexico is respectfully requested. Figure 2 is a separation study for DTV channel 19 from the proposed site based on the minimum distance separation requirements contained in the Memorandum of Understanding (MOU) between the US and Mexico which are applicable to full-service US and Mexican DTV stations. As indicated, the proposed KLDO-DT operation on channel 19 would be involved in 3 short-spacings, namely with a Mexican DTV assignment on channel 19 at Reynosa, TA (4.73 km short-spacing) and Mexican NTSC assignments on channel 21 and 33 at Nuevo Laredo, TA (2.16 km short-spacing).

With respect to the Nuevo Laredo channel 21 short-spacing, based on use of the provisions of OET-69 and the Longley-Rice (LR) model as permitted by the MOU¹, there would be no calculated interference to a maximum NTSC facility at Nuevo Laredo (ERP 5000 kW/HAAT 609 meters). Figure 3 provides the results of the OET-69 interference analysis.

With respect to the Nuevo Laredo channel 33 short-spacing, it is believed that this short-spacing is not applicable as the interference potential would be to an NTSC channel 19 operation from the NTSC channel 33 operation at Nuevo Laredo (-14 channel UHF sound image taboo).

With respect to the 4.73 km short-spacing with the Reynosa channel 19 DTV allotment, the proposed KLDO-DT operation will reduce the magnitude of the short-spacing currently approved by Mexico by 20.2 km as KLDO-DT's Appendix B allotment is currently short-spaced by 24.93 km to the Reynosa channel 19 allotment. Furthermore, based on a OET-69 interference analysis, the proposed KLDO-DT operation is predicted to cause less interference to the Reynosa channel 19 DTV allotment than the KLDO-DT Appendix B allotment. Figure 4A and 4B provide the outputs of the OET-69 interference studies to the Reynosa channel 19 DTV allotment from both the proposed operation and the KLDO-DT

¹ The LR methodology is set forth in Appendix 5 of the MOU.

Appendix B allotment, respectively.² As indicated on Figures 4A and 4B, the proposed KLDO-DT operation will reduce the predicted interference area by 177 km². Therefore, it is believed that the proposed KLDO-DT operation complies with the interference criteria contained in the MOU.

Radiofrequency Electromagnetic Field Exposure

The proposed KLDO-DT STA facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed DTV STA antenna is located 144.8 meters above ground level with a maximum ERP of 50 kW (horizontal polarization). A “worst-case” vertical plane relative field value of 0.3 (for angles below 60 degrees downward) is assumed for the antenna's downward radiation (see Figure 5 attached). The calculated power density at a point 2 meters above ground level is 0.0074 mW/cm². This is 2.2% of the FCC's recommended limit of 0.34 mW/cm² for channel 19 for an “uncontrolled” environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced

² Operation with a nondirectional ERP of 1000 kW and an HAAT of 365 meters (US UHF DTV maximum) has been presumed for Reynosa DTV channel 19.

power or shut down. The proposed KLDO-DT STA operation appears to be otherwise categorically excluded from environmental processing.

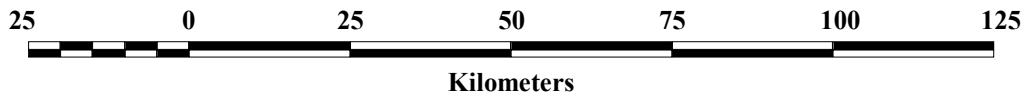
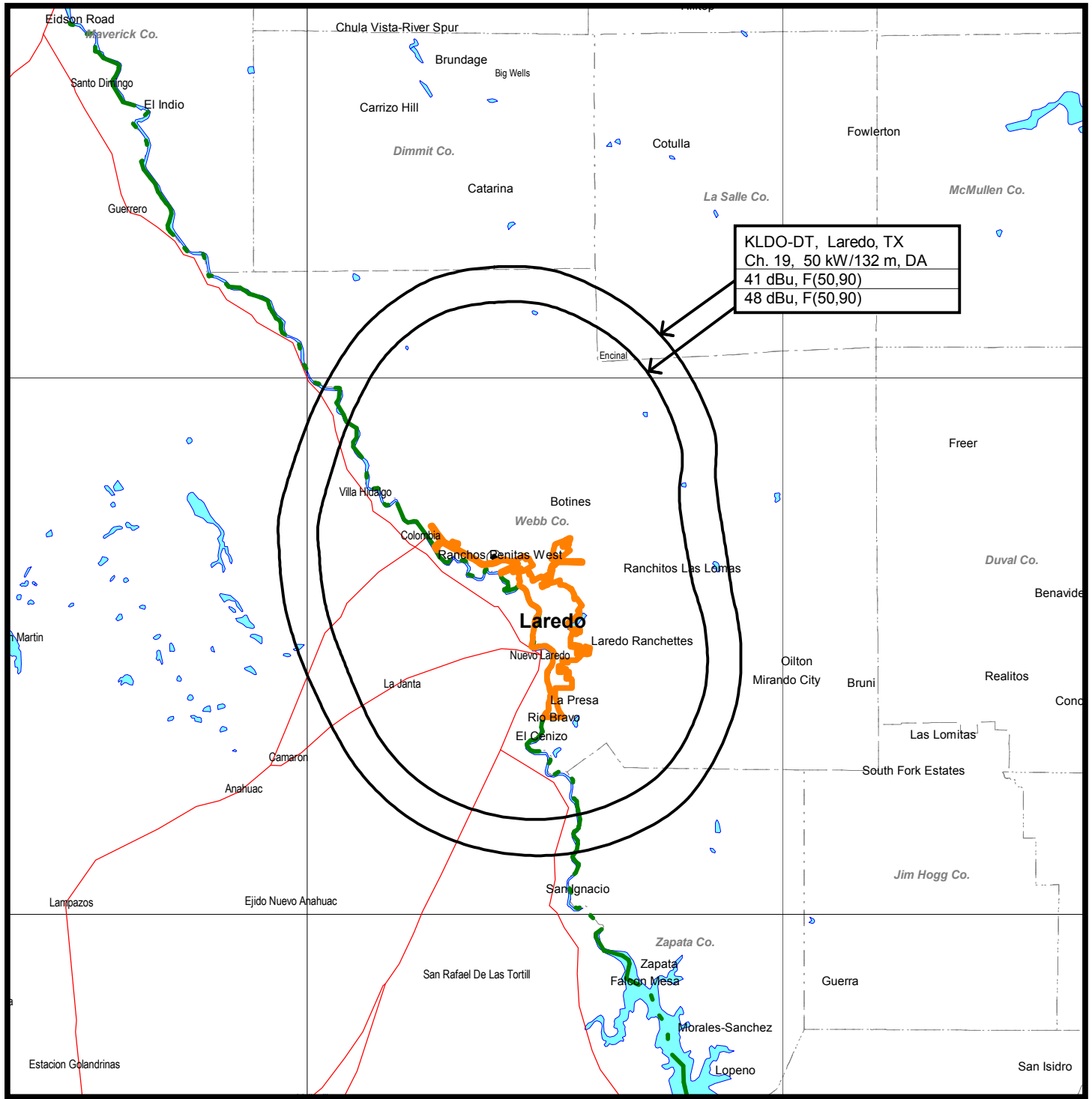
A handwritten signature in black ink, appearing to read 'T. Howell', is positioned above the printed name.

Thomas J. Howell

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-6000

February 6, 2009

Figure 1



FCC PREDICTED COVERAGE CONTOURS

DTV STATION KLDO-DT
LAREDO, TEXAS

CH 19 50 KW (MAX-DA) 132 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

TV Study

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



Station Type:	DT	Station Coordinates:	027-39-52.90 099-36-24.90 (NAD 27)	
Station Channel:	19	Station Zone:	II	Equivalent Canadian Class: EX
Buffer Distance:	32 km	Comment:	KLDO-DT STA Request	

<i>Callsign</i>	<i>Status</i>	<i>Channel</i>	<i>Service</i>	<i>Zone</i>	<i>City</i>					<i>State</i>	<i>Latitude</i>	<i>Dist. (km)</i>	<i>Min. (km)</i>	<i>Spacing (km)</i>
<i>Facility ID</i>	<i>ARN</i>				<i>Class</i>	<i>DA</i>	<i>Ant ID</i>	<i>ERP (kW)</i>	<i>HAAT (m)</i>	<i>Rec Type</i>	<i>Longitude</i>	<i>Bear. (deg)</i>	<i>Max. (km)</i>	<i>Comment</i>
KLDO-TV	CP MOD	19	DT	2	LAREDO					TX	027-39-52.9	0	223.7	-223.7
51479	BMPCDT	20060112AEV			D	71879		5	109.4	C	099-36-24.9	0	223.7	SHORT
DKLDO-TV	DTVALT	19	DT	3	LAREDO					TX	27-30-03	20.51	223.7	-203.19
0						17147		81	67	C	099-30-37	152.38	223.7	SHORT
	MEXDTV	19	DT		REYNOSA					TA	26-04-59	218.27	223	-4.73
0						0		0	0	C	98-17-51	143.25	223	SHORT
KVCT	CP	19 +	TV	3	VICTORIA					TX	028-50-42	276.38	244.6	31.78
35846	BPCT	20030212AAC			N	59336		1000	312	C	097-07-33	61.04	244.6	CLEAR
	MEXTAB	21	TV		NUEVO LAREDO					TA	027-26-45	26.16	24	-2.16
0						0		0	0	C	099-30-27	158.04	32	SHORT
		21 Z	TA	2	NUEVO LAREDO					TA	027-29-48	21.39	24	2.61
97753						N				C	099-30-01	150.62	32	CLOSE
KLDO-TV	LIC	27 -	TV	3	LAREDO					TX	027-30-03	20.51	24.1	3.59
51479	BLCT	19850124KT			D	17147		3720	67	C	099-30-37	152.38	96.6	CLOSE
	MEXTAB	33	TV		NUEVO LAREDO					TA	027-26-45	26.16	24	-2.16
0						0		0	0	C	099-30-27	158.04	95	SHORT
		33 +	TA	2	NUEVO LAREDO					TA	027-29-48	21.39	24	2.61
98248						N				C	099-30-01	150.62	95	CLOSE

Figure 3

LR/OET-69 INTERFERENCE CAUSED

RSS/SUM Not Enabled

Cell Size (km): 1.00

Terrain Increment (km): 1.00

Using Offset in Determining Thresholds

XNUEV 27-26-45 99-30-27 21(Z) 5000.000 kw 752.4 m 50.0% 62.4 dBu

NUEVO LAREDO TA

Null null

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	38995.664062	156474
not affected by terrain losses	38471.343750	155952

KLDO 27-39-52.9 099-36-24.9 19(N) 50.000 kw 289 m DA 10.0% 39.2 dBu

LAREDO TX 6996 132 DTVSERVICE: 132000 NTSCSERVICE: 132000

CP MOD BMPCDT20060112AEV

0.877	0.965	1.000	0.958	0.844	0.657	0.456	0.316	0.258	0.258	0.316	0.457
0.657	0.844	0.958	1.000	0.965	0.877	0.741	0.589	0.450	0.334	0.246	0.194
0.169	0.154	0.142	0.141	0.154	0.169	0.194	0.247	0.334	0.449	0.589	0.741

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -24.00

	Area	Pop
Interference	0	0

Facility	Channel	Type	Baseline	Permissible	IX	%Base
XNUEV, NUEVO LAREDO, TA	21	TV	156474	2.0	0	0.00

LR/OET-69 INTERFERENCE CAUSED FROM KLDO-DT ALLOTMENT

RSS/SUM Not Enabled
 Cell Size (km): 1.00
 Terrain Increment (km): 1.00
 Using Offset in Determining Thresholds

NEW-DT 26-04-59 98-17-51 19(N) 1000.000 kw 409.6 m 90.0% 39.2 dBu
 REYNOSA TA
 APP BPFS20050922AAF
 Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	36441.125000	700577
not affected by terrain losses	36400.683594	700577

KLDOTV 27-30-04 99-30-37 19(N) 200.000 kw 192 m DA 10.0% 39.2 dBu
 LAREDO TX 6996 132 DTVSERVICE: 132000 NTSCSERVICE: 132000
 CP MOD BMPCDT20060112AEV
 0.877 0.965 1.000 0.958 0.844 0.657 0.456 0.316 0.258 0.258 0.316 0.457
 0.657 0.844 0.958 1.000 0.965 0.877 0.741 0.589 0.450 0.334 0.246 0.194
 0.169 0.154 0.142 0.141 0.154 0.169 0.194 0.247 0.334 0.449 0.589 0.741
 Ref Az: 0.0
 Using DEFAULT vertical antenna pattern

D/U Baseline: 15.00

	Area	Pop
Interference	275.19	364(0.1)

Facility	Channel	Type	Baseline	Permissible	IX	%Base
NEW-DT, REYNOSA, TA	19	DTV	700577	2.0	364	0.05

Figure 4B

LR/OET-69 INTERFERENCE CAUSED FROM KLDO-DT PROPOSED

RSS/SUM Not Enabled
 Cell Size (km): 1.00
 Terrain Increment (km): 1.00
 Using Offset in Determining Thresholds

NEW-DT 26-04-59 98-17-51 19(N) 1000.000 kw 409.6 m 90.0% 39.2 dBu
 REYNOSA TA
 APP BPFS20050922AAF
 Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	36441.125000	700577
not affected by terrain losses	36400.683594	700577

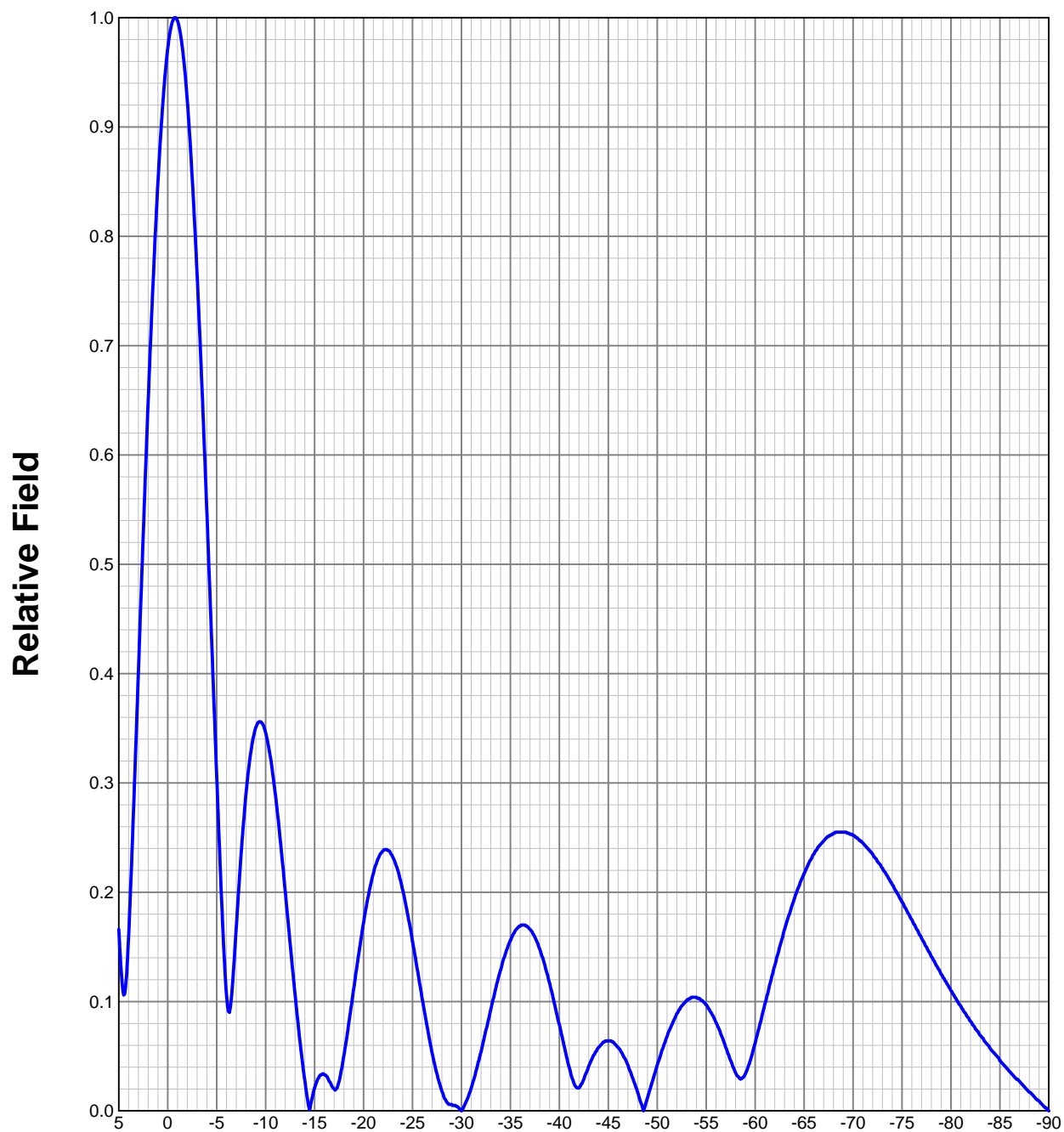
KLDOTV 27-39-52.9 099-36-24.9 19(N) 50.000 kw 289 m DA 10.0% 39.2 dBu
 LAREDO TX 6996 132 DTVSERVICE: 132000 NTSCSERVICE: 132000
 CP MOD BMPCDT20060112AEV
 0.877 0.965 1.000 0.958 0.844 0.657 0.456 0.316 0.258 0.258 0.316 0.457
 0.657 0.844 0.958 1.000 0.965 0.877 0.741 0.589 0.450 0.334 0.246 0.194
 0.169 0.154 0.142 0.141 0.154 0.169 0.194 0.247 0.334 0.449 0.589 0.741
 Ref Az: 0.0
 Using DEFAULT vertical antenna pattern

D/U Baseline: 15.00

	Area	Pop
Interference	98.64	31(0.0)

Facility	Channel	Type	Baseline	Permissible	IX	%Base
NEW-DT, REYNOSA, TA	19	DTV	700577	2.0	31	0.01

ALP8L3-HSBR-19

ELEVATION PATTERN**Type:****ALP8L3****Channel:****19****Directivity:****Numeric****dBd****Location:****Main Lobe:****9.05****9.57****Beam Tilt:****-0.75****Horizontal:****8.55****9.32****Polarization:****Horizontal***Preliminary, subject to final design and review.*