

TECHNICAL EXHIBIT
DISPLACEMENT APPLICATION (DIGITAL)
FOR LPTV STATION KPXH-LP (FACILITY ID 1809)
FORT COLLINS, COLORADO
CH 25 15 KW (MAX-DA)

Technical Narrative

This Technical Exhibit supports a digital displacement application for low power television (LPTV) station KPXH-LP at Fort Collins, Colorado. Station KPXH-LP is licensed (BLTTL-20050428ABM) to operate on analog channel 52. A directional antenna system is employed with a maximum visual effective radiated power (ERP) of 25 kilowatts (kW). The antenna radiation center height (RCAMSL) is 2179 meters above mean sea level (AMSL). Registration with the FCC is not required as the structure is less than 200 feet and meets the minimum slope requirement to nearby airports. The site coordinates are 40-32-56 N, 105-11-47 W (NAD-27).

KPXH-LP is authorized (BDISDTL-20060321ADB) to operate on digital 13 at the same transmitter site via displacement application from its out-of-core, licensed analog channel. A non-directional antenna system is employed with an ERP of 0.3 kilowatts (kW). The antenna RCAMSL remains 2179 meters.

The authorized, channel 13, digital operation for KPXH-LP is displaced by the post-transition operation for station KBDI-DT (channel 13, Broomfield, CO), located 100 kilometers away. Thus, station KPXH-LP wishes to displace to a new channel (25) and operate digitally.

Proposed Facilities

This application proposes digital operation on channel (25), at the current transmitter site, using a new, non-directional antenna. A Kathrein-Scala (KAT) array of two

skewed 4DR-4S directional antennas will be oriented with the main lobe at 74° True (see Figure 1). The proposed, digital ERP is 15 kW and the antenna RCAMSL will remain 2179 meters.

Figure 2 is a map showing the licensed 68 dBu (analog) and proposed 51 dBu (digital) coverage contours. As can be seen on the map, there is common area where both contours overlap.

Allocation Considerations – Post-Transition

A study has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending analog or digital TV, LPTV/translator and Class A TV stations. Using the procedures outlined in the FCC's OET-69 Bulletin, a standard 1 kilometer grid and 1 kilometer terrain distance increment, and 2000 U.S. Census, the proposal complies with the current FCC policy (i.e., less than 0.5% new interference caused to other pertinent assignments). Figure 3 is a summary of the OET-69 interference results.

The applicant recognizes the proposal is secondary to other authorized full-service analog and DTV operations. The applicant understands that it must correct and/or eliminate prohibited interference that may result from its proposed operation.

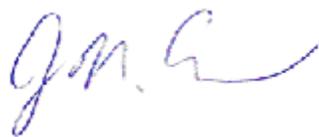
Radiofrequency Electromagnetic Field Exposure

The proposed KPXH-LP digital 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 antenna is located 21 meters above ground level. The proposed ERP is 15 kW. Based on a downward relative field of 0.26 (see Figure 4), the calculated power density at a point 2 meters (6.6 feet) above ground level will not exceed 0.047 mW/cm², or 13% of the FCC's recommended limit of 0.36 mW/cm² for channel 25 for an "uncontrolled" environment. The only other known broadcast operation located within 250 meters is station

K48CG. It operates on channel 48 with 3 kW (ERP) and an Andrew, model ALP16L2-HSER directional antenna at an RCAMSL of 2188 meters. Based on a conservative downward relative field of 0.2 (see Figure 4), the calculated power density at a point 2 meters (6.6 feet) above ground level will not exceed 0.0051 mW/cm^2 , or 1.1% of the FCC's recommended limit of 0.45 mW/cm^2 for channel 48 for an "uncontrolled" environment. Thus, the total, combined contribution from both stations is 14.1% or less than 100% of the permissible limit.

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 station is at reduced power or shut down.

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.



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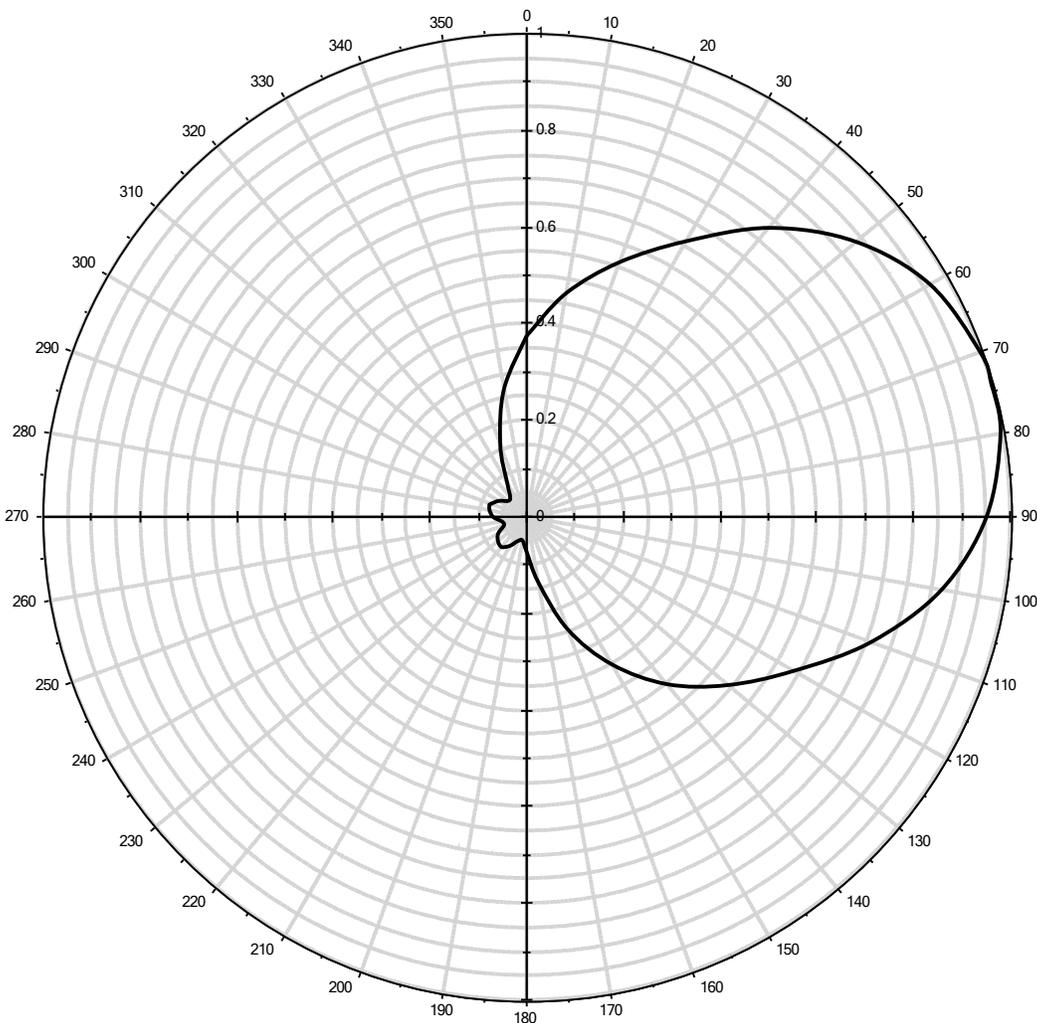
June 9, 2009



DA Inquiry

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

Antenna Pattern: Antenna ID: 550048



Note: display reflects rotation of 0.00°

Antenna Details:

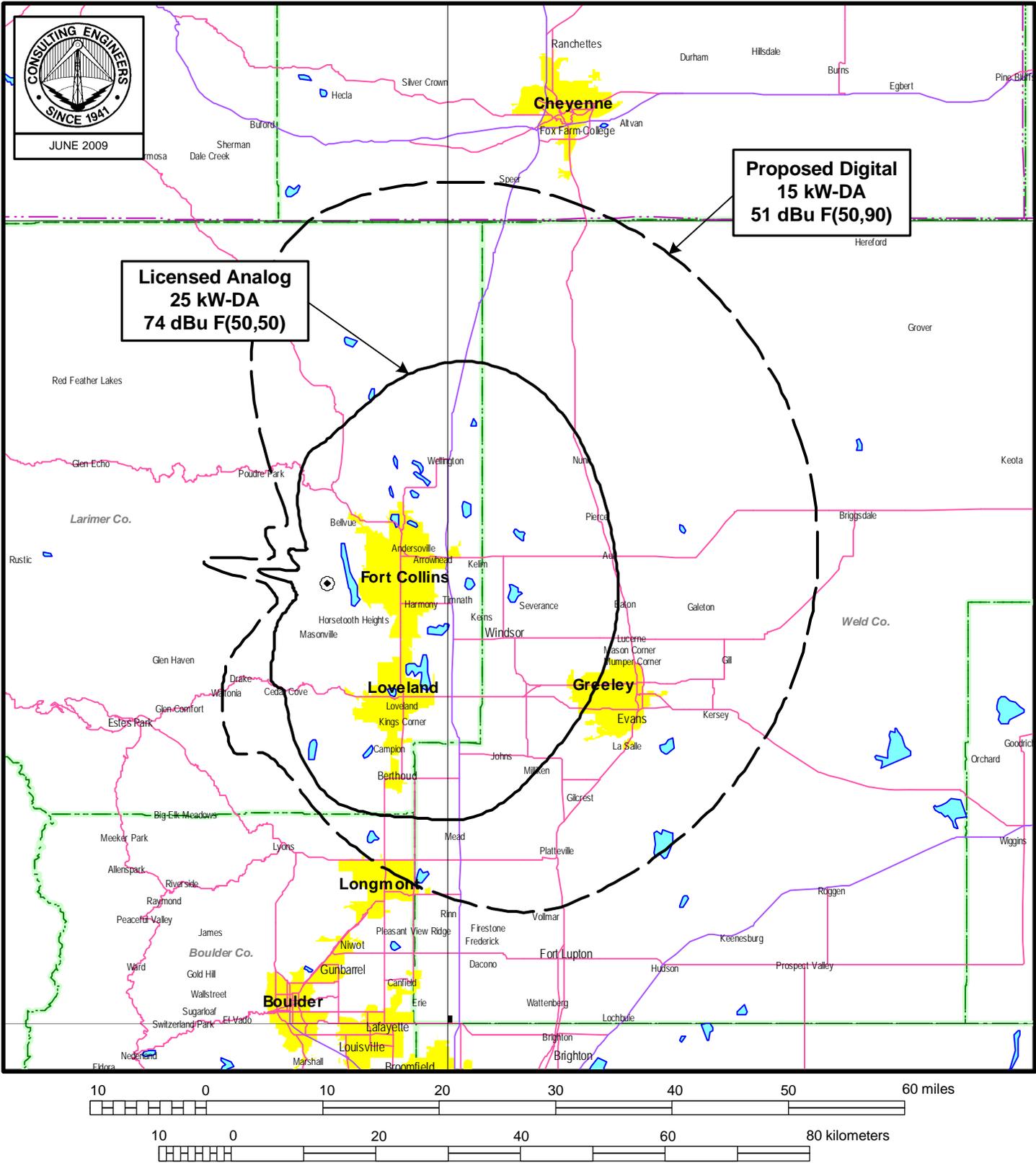
0°	0.375	60°	0.963	120°	0.638	180°	0.073	240°	0.068	300°	0.066	74°	1.000
10°	0.470	70°	0.998	130°	0.542	190°	0.050	250°	0.050	310°	0.051	287°	0.081
20°	0.561	80°	0.995	140°	0.452	200°	0.053	260°	0.053	320°	0.053		
30°	0.659	90°	0.951	150°	0.353	210°	0.069	270°	0.070	330°	0.081		
40°	0.781	100°	0.871	160°	0.248	220°	0.081	280°	0.078	340°	0.161		
50°	0.887	110°	0.758	170°	0.138	230°	0.078	290°	0.079	350°	0.270		

Antenna Make: SCA

Standard Pattern:

Antenna Model: 4DR-4S-SP

Last Change Date:



PREDICTED COVERAGE CONTOURS

STATION KPXH-LP

FORT COLLINS, COLORADO

CH 13 15 kW (MAX-DA)

du Treil, Lundin & Rackley, Inc Sarasota, Florida

Figure 3
Sheet 1 of 14

Census data selected: 2000
Post DTV Transition Database Selected

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-08-2009 Time: 09:37:42
Record Selected for Analysis

KPXH-LD USERRECORD-01 FORT COLLINS CO US
Channel 25 ERP 15. kW HAAT 389. m RCAMSL 02179 m STRINGENT MASK
Latitude 040-32-56 Longitude 0105-11-47
Status APP Zone 2 Border
Dir Antenna Make usr Model 000000000kpxhl Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 1.0 km/side
Distance Increments for Longley-Rice Analysis 0.20 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	2.109	481.2	51.9
45.0	10.433	614.6	65.4
90.0	13.566	638.8	67.8
135.0	3.705	578.4	57.9
180.0	0.080	517.2	32.9
225.0	0.095	187.3	23.1
270.0	0.073	33.0	9.1
315.0	0.041	61.3	10.8

Contour Overlap to Proposed Station

Station	ERP	HAAT	Distance	Notes
KHDE-LP 25 LARAMIE	2.109	481.2	51.9	causes

Contour overlap to Digital LPTV station
KPXH-LD 25 FORT COLLINS CO USERRECORD01

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
Proposed facility is beyond the Canadian coordination distance
Proposed facility is beyond the Mexican coordination distance
Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
25	KPXH-LD	FORT COLLINS CO	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
24	K57IL	ANTON CO	175.2	CP	BDISDTT	-20090218ACD
Proposed station is beyond the site to nearest cell evaluation distance						
24	K24HQ-D	BOULDER CO	61.2	LIC	BLDPT	-20080612ACU
24	KRDO-TV	COLORADO SPRINGS CO	202.5	LIC	BLCDT	-20060329AAW
24	KPAH-LP	LARAMIE WY	84.4	LIC	BLTTA	-20030519ACB
Proposed station is beyond the site to nearest cell evaluation distance						
25	NEW	ASPEN CO	202.7	APP	BNPTTL	-20000828AIR

Figure 3
Sheet 2 of 14

Proposal causes no interference						
25	NEW	ASPEN CO	202.8	APP	BNPTTL	-20000821ABR
Proposal causes no interference						
25	NEW	ASPEN CO	202.0	APP	BNPTTL	-20000831EKS
Proposal causes no interference						
25	KZCS-LD	COLORADO SPRINGS CO	202.5	CP	BDCDDTL	-20060921ACL
25	KZCS-LP	COLORADO SPRINGS CO	202.5	CP	BDISDTL	-20090203AAX
25	NEW	E.EAGLE CO	164.4	APP	BNPTTL	-20000828ASE
Proposal causes no interference						
25	K25FZ	GRAND JUNCTION CO	344.8	LIC	BLTT	-19990706JH
Proposal causes no interference						
25	K25FZ	GRAND JUNCTION CO	344.8	CP	BDFCDTT	-20060330AAQ
Proposal causes no interference						
25	K25GZ	HOLYOKE CO	239.7	LIC	BLTT	-20030304AAS
Proposal causes no interference						
25	K25KC	PITKIN CO	244.4	CP	BNPTT	-20000830BTA
Proposal causes no interference						
25	K25KB	THOMASVILLE CO	183.6	CP	BNPTT	-20000829AUQ
Proposal causes no interference						
25	NEW	WOLCOTT CO	160.3	APP	BNPTTL	-20000828ASQ
Proposal causes no interference						
25	K57CZ	NORTH PLATTE NE	378.9	CP	BDISDTT	-20061208AAV
Proposed station is beyond the site to nearest cell evaluation distance						
25	K57CZ	NORTH PLATTE NE	378.9	APP	BDISDTT	-20060329ANI
Proposed station is beyond the site to nearest cell evaluation distance						
25	KHDE-LP	LARAMIE WY	64.0	LIC	BLTTTL	-20080124AES
Proposal causes no interference						
26	NEW	ASPEN CO	202.0	APP	BNPTTL	-20000831EKR
Proposed station is beyond the site to nearest cell evaluation distance						
26	K26GY	BRECKENRIDGE CO	127.6	LIC	BLTTTL	-20060928AGU
Proposed station is beyond the site to nearest cell evaluation distance						
26	K26HQ	ESTES PARK CO	34.5	LIC	BLTTTL	-20070525ADX
Proposal causes no interference						
26	K63AB	LONGMONT CO	71.1	CP	BDISTTL	-20070703ABO
Proposed station is beyond the site to nearest cell evaluation distance						
26	K26FM	PEETZ & N. LOGAN CTY CO	170.0	LIC	BLTT	-20010914AAN
Proposed station is beyond the site to nearest cell evaluation distance						
27	NEW	ASPEN CO	202.8	APP	BNPTT	-20000831CNN
Proposed station is beyond the site to nearest cell evaluation distance						
27	K27FA	CRAIG CO	199.1	LIC	BLTTTL	-19950825IH
Proposed station is beyond the site to nearest cell evaluation distance						
27	KZCO-LP	DENVER CO	97.3	LIC	BLTTTL	-20050223ABM
Proposed station is beyond the site to nearest cell evaluation distance						
27	K27CB	FRASER, ETC. CO	90.6	LIC	BLTT	-19890609IM
Proposed station is beyond the site to nearest cell evaluation distance						
27	KGHB-CA	PUEBLO, ETC. CO	202.5	LIC	BLTT	-19961025JB
Proposed station is beyond the site to nearest cell evaluation distance						
27	KGHB-CA	PUEBLO, ETC. CO	202.5	APP	BSTA	-20050718AAI
Proposed station is beyond the site to nearest cell evaluation distance						
28	K28HI	BRECKENRIDGE, DILLON CO	131.4	LIC	BLTTTL	-20040308AAQ
Proposed station is beyond the site to nearest cell evaluation distance						
28	KLPD-LP	DENVER CO	71.1	LIC	BLTTTL	-20030402AEG
Proposed station is beyond the site to nearest cell evaluation distance						
28	K28FW	PEETZ & N. LOGAN CTY CO	170.0	LIC	BLTT	-20010914AAO
Proposed station is beyond the site to nearest cell evaluation distance						
28	K28GE	WOODLAND PARK CO	174.0	LIC	BLTTTL	-19991203AAV
Proposed station is beyond the site to nearest cell evaluation distance						
29	K58FY	LAKE GEORGE, ETC. CO	168.8	CP	BPTT	-20040109ABN
Proposed station is beyond the site to nearest cell evaluation distance						
32	K32EO	COLORADO SPRINGS CO	202.6	LIC	BLTT	-20060907ABZ
Proposed station is beyond the site to nearest cell evaluation distance						
32	K32IL	E. EAGLE CO	164.4	CP	BNPTTL	-20000828ASJ
Proposed station is beyond the site to nearest cell evaluation distance						
32	K32EX	PEETZ & N. LOGAN CTY CO	170.0	LIC	BLTT	-20011009AAK
Proposed station is beyond the site to nearest cell evaluation distance						
32	K32AB	YUMA CO	206.8	CP MOD	BMPPT	-20011106AAG
Proposed station is beyond the site to nearest cell evaluation distance						
32	K32AB	YUMA CO	206.8	LIC	BLTT	-20011114AAG

Figure 3
Sheet 3 of 14

Proposed station is beyond the site to nearest cell evaluation distance
 33 K33FI AKRON CO 180.0 LIC BLTT -20000217AAQ
 33 KMAS-LP DENVER CO 97.3 APP BSTA -20080514AGS
 Proposed station is beyond the site to nearest cell evaluation distance
 33 KMAS-LP DENVER CO 97.3 LIC BLTTL -20080602AIR
 Proposed station is beyond the site to nearest cell evaluation distance
 33 K33BV FRASER, ETC. CO 90.6 LIC BLTT -19890609IJ
 Proposed station is beyond the site to nearest cell evaluation distance
 33 KHSB-LP STEAMBOAT SPRINGS CO 131.1 LIC BLTTL -20080229ACL
 Proposed station is beyond the site to nearest cell evaluation distance
 33 K33EW WOODLAND PARK CO 174.0 LIC BLTT -19990126JB

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
24	K24HQ-D	BOULDER CO	BLDTT -20080612ACU

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
23	KDEO-LP	DENVER CO	36.4	APP	BSTA -20090310ADP
23	KCDO	STERLING CO	111.9	APP	BMPCDT -20080602AJL
24	K57IL	ANTON CO	163.4	CP	BDISDTT -20090218ACD
24	KRDO-TV	COLORADO SPRINGS CO	143.3	LIC	BLCDDT -20060329AAW
24	KRDO-TV	COLORADO SPRINGS CO	143.3	PLN	DTVPLN -DTVP0869
24	K24CH-D	CORTEZ, ETC CO	385.8	LIC	BLDTT -20090522ACF
24	K24FU-D	PLEASANT VALLEY CO	272.1	LIC	BLDTT -20081211AFV
25	KZCS-LD	COLORADO SPRINGS CO	143.4	CP	BDCCDTL -20060921ACL
25	KZCS-LP	COLORADO SPRINGS CO	143.4	CP	BDISDTL -20090203AAX
25	KPXH-LD	FORT COLLINS CO	61.2	APP	USERRECORD-01

Total scenarios = 4

Result key: 1

Scenario 1 Affected station 2 K24HQ-D

Before Analysis

Results for: 24A CO BOULDER BLDTT 20080612ACU LIC

HAAT	1.0 m, ATV ERP	0.2 kW	POPULATION	AREA (sq km)
within Noise Limited Contour			184073	523.0
not affected by terrain losses			182333	518.1
lost to NTSC IX			0	0.0
lost to additional IX by ATV			6071	14.7
lost to ATV IX only			6071	14.7
lost to all IX			6071	14.7

Potential Interfering Stations Included in above Scenario 1

24A CO COLORADO SPRINGS BLCDDT 20060329AAW LIC

After Analysis

Results for: 24A CO BOULDER BLDTT 20080612ACU LIC

HAAT	1.0 m, ATV ERP	0.2 kW	POPULATION	AREA (sq km)
within Noise Limited Contour			184073	523.0
not affected by terrain losses			182333	518.1
lost to NTSC IX			0	0.0
lost to additional IX by ATV			6071	14.7
lost to ATV IX only			6071	14.7
lost to all IX			6071	14.7

Potential Interfering Stations Included in above Scenario 1

Figure 3
Sheet 4 of 14

24A CO COLORADO SPRINGS BLCDDT 20060329AAW LIC
 25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.0000%

Result key: 2

Scenario 2 Affected station 2 K24HQ-D

Before Analysis

Results for: 24A CO BOULDER BLDTT 20080612ACU LIC

HAAT	1.0 m, ATV ERP	0.2 kW	POPULATION	AREA (sq km)
within Noise Limited Contour			184073	523.0
not affected by terrain losses			182333	518.1
lost to NTSC IX			0	0.0
lost to additional IX by ATV			13111	24.5
lost to ATV IX only			13111	24.5
lost to all IX			13111	24.5

Potential Interfering Stations Included in above Scenario 2

24A CO COLORADO SPRINGS DTVPLN DTVP0869 PLN

After Analysis

Results for: 24A CO BOULDER BLDTT 20080612ACU LIC

HAAT	1.0 m, ATV ERP	0.2 kW	POPULATION	AREA (sq km)
within Noise Limited Contour			184073	523.0
not affected by terrain losses			182333	518.1
lost to NTSC IX			0	0.0
lost to additional IX by ATV			13111	24.5
lost to ATV IX only			13111	24.5
lost to all IX			13111	24.5

Potential Interfering Stations Included in above Scenario 2

24A CO COLORADO SPRINGS DTVPLN DTVP0869 PLN
 25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.0000%

Result key: 3

Scenario 3 Affected station 2 K24HQ-D

Before Analysis

Results for: 24A CO BOULDER BLDTT 20080612ACU LIC

HAAT	1.0 m, ATV ERP	0.2 kW	POPULATION	AREA (sq km)
within Noise Limited Contour			184073	523.0
not affected by terrain losses			182333	518.1
lost to NTSC IX			0	0.0
lost to additional IX by ATV			6071	14.7
lost to ATV IX only			6071	14.7
lost to all IX			6071	14.7

Potential Interfering Stations Included in above Scenario 3

24A CO COLORADO SPRINGS BLCDDT 20060329AAW LIC

After Analysis

Results for: 24A CO BOULDER BLDTT 20080612ACU LIC

HAAT	1.0 m, ATV ERP	0.2 kW	POPULATION	AREA (sq km)
within Noise Limited Contour			184073	523.0
not affected by terrain losses			182333	518.1
lost to NTSC IX			0	0.0

lost to additional IX by ATV 6071 14.7
lost to ATV IX only 6071 14.7
lost to all IX 6071 14.7

Potential Interfering Stations Included in above Scenario 3

24A CO COLORADO SPRINGS BLCDT 20060329AAW LIC
25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.0000%

Result key: 4
Scenario 4 Affected station 2 K24HQ-D
Before Analysis

Results for: 24A CO BOULDER BLDTT 20080612ACU LIC
HAAT 1.0 m, ATV ERP 0.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	184073	523.0
not affected by terrain losses	182333	518.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	13111	24.5
lost to ATV IX only	13111	24.5
lost to all IX	13111	24.5

Potential Interfering Stations Included in above Scenario 4

24A CO COLORADO SPRINGS DTVPLN DTVP0869 PLN
25A CO FORT COLLINS USERRECORD01 APP

After Analysis

Results for: 24A CO BOULDER BLDTT 20080612ACU LIC
HAAT 1.0 m, ATV ERP 0.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	184073	523.0
not affected by terrain losses	182333	518.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	13111	24.5
lost to ATV IX only	13111	24.5
lost to all IX	13111	24.5

Potential Interfering Stations Included in above Scenario 4

24A CO COLORADO SPRINGS DTVPLN DTVP0869 PLN
25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.0000%

Worst case new IX 0.0000% Scenario 1

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
24	KRDO-TV	COLORADO SPRINGS CO	BLCDT -20060329AAW

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
23	KREG-TV	GLENWOOD SPRINGS CO	228.9	PLN	DTVPLN -DTV0830
23	KREG-TV	GLENWOOD SPRINGS CO	228.9	CP MOD	BMPCDT -20060201BJU
23	KCDO	STERLING CO	163.6	APP	BMPCDT -20080602AJL
24	KNAT-TV	ALBUQUERQUE NM	417.1	PLN	DTVPLN -DTV0888
24	KNAT-TV	ALBUQUERQUE NM	417.1	CP MOD	BMPCDT -20080618ABF
24	KNAT-TV	ALBUQUERQUE NM	417.1	LIC	BLCDT -20051116ACT
25	KPXH-LD	FORT COLLINS CO	202.5	APP	USERRECORD-01

Total scenarios = 2

Result key: 5
Scenario 1 Affected station 3 KRDO-TV
Before Analysis

Results for: 24A CO COLORADO SPRINGS BLCDT 20060329AAW LIC
HAAT 675.0 m, ATV ERP 200.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	2263356	31527.8
not affected by terrain losses	1820653	28831.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

After Analysis

Results for: 24A CO COLORADO SPRINGS BLCDT 20060329AAW LIC
HAAT 675.0 m, ATV ERP 200.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	2263356	31527.8
not affected by terrain losses	1820653	28831.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	7355	45.0
lost to ATV IX only	7355	45.0
lost to all IX	7355	45.0

Potential Interfering Stations Included in above Scenario 1

25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.4040%

Result key: 6
Scenario 2 Affected station 3 KRDO-TV
Before Analysis

Results for: 24A CO COLORADO SPRINGS BLCDT 20060329AAW LIC
HAAT 675.0 m, ATV ERP 200.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	2263356	31527.8
not affected by terrain losses	1820653	28831.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	8776	1386.7
lost to ATV IX only	8776	1386.7
lost to all IX	8776	1386.7

Potential Interfering Stations Included in above Scenario 2

23A CO STERLING BMPCDT 20080602AJL APP

After Analysis

Results for: 24A CO COLORADO SPRINGS BLCDT 20060329AAW LIC
HAAT 675.0 m, ATV ERP 200.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	2263356	31527.8
not affected by terrain losses	1820653	28831.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	16131	1411.7
lost to ATV IX only	16131	1411.7
lost to all IX	16131	1411.7

Potential Interfering Stations Included in above Scenario 2

23A CO STERLING BPCDDT 20080602AJL APP
25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.4059%
Worst case new IX 0.4059% Scenario 2

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Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
25	KZCS-LD	COLORADO SPRINGS CO	BDCDDTL	-20060921ACL

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
24	K57IL	ANTON CO	179.7	CP	BDISDTT	-20090218ACD
24	K24HQ-D	BOULDER CO	143.4	LIC	BLDDT	-20080612ACU
24	KRDO-TV	COLORADO SPRINGS CO	0.3	LIC	BLCDDT	-20060329AAW
24	KRDO-TV	COLORADO SPRINGS CO	0.3	PLN	DTVPLN	-DTV0869
25	KZCS-LP	COLORADO SPRINGS CO	0.0	CP	BDISDTL	-20090203AAX
25	K25FZ	GRAND JUNCTION CO	337.6	CP	BDFCDTT	-20060330AAQ
25	K25JU-D	GARDEN CITY KS	363.7	CP	BDCDDTL	-20061030ASE
25	K25HJ	HORNSBY RANCH, ETC. NM	422.9	CP	BDFCDTT	-20060327AGF
25	K25JT-D	BLANDING/MONTICELLO UT	413.5	CP	BDCDDTL	-20061023AEG
26	K26IT-D	REDSTONE, ETC. CO	210.6	CP	BDCDDTT	-20061030AAI
25	KPXH-LD	FORT COLLINS CO	202.5	APP	USERRECORD-01	

Total scenarios = 4

Result key: 7
Scenario 1 Affected station 8 KZCS-LD
Before Analysis

Results for: 25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	685491	12135.0
not affected by terrain losses	674654	11742.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	663526	10344.3
lost to ATV IX only	663526	10344.3
lost to all IX	663526	10344.3

Potential Interfering Stations Included in above Scenario 1

24A CO COLORADO SPRINGS	BLCDDT	20060329AAW	LIC
25A CO COLORADO SPRINGS	BDISDTL	20090203AAX	CP

After Analysis

Results for: 25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	685491	12135.0
not affected by terrain losses	674654	11742.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	663526	10344.3
lost to ATV IX only	663526	10344.3
lost to all IX	663526	10344.3

Potential Interfering Stations Included in above Scenario 1

24A CO COLORADO SPRINGS	BLCDDT	20060329AAW	LIC
25A CO COLORADO SPRINGS	BDISDTL	20090203AAX	CP
25A CO FORT COLLINS	USERRECORD01		APP

Percent new IX = 0.0000%

Result key: 8
Scenario 2 Affected station 8 KZCS-LD
Before Analysis

Results for: 25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	685491	12135.0
not affected by terrain losses	674654	11742.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	663526	10344.3
lost to ATV IX only	663526	10344.3
lost to all IX	663526	10344.3

Potential Interfering Stations Included in above Scenario 2

24A CO COLORADO SPRINGS	DTVPLN	DTV0869	PLN
25A CO COLORADO SPRINGS	BDISDTL	20090203AAX	CP

After Analysis

Results for: 25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	685491	12135.0
not affected by terrain losses	674654	11742.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	663526	10344.3
lost to ATV IX only	663526	10344.3
lost to all IX	663526	10344.3

Potential Interfering Stations Included in above Scenario 2

24A CO COLORADO SPRINGS	DTVPLN	DTV0869	PLN
25A CO COLORADO SPRINGS	BDISDTL	20090203AAX	CP
25A CO FORT COLLINS	USERRECORD01		APP

Percent new IX = 0.0000%

Result key: 9
Scenario 3 Affected station 8 KZCS-LD
Before Analysis

Results for: 25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	685491	12135.0
not affected by terrain losses	674654	11742.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	663526	10344.3
lost to ATV IX only	663526	10344.3
lost to all IX	663526	10344.3

Potential Interfering Stations Included in above Scenario 3

24A CO COLORADO SPRINGS	BLCDDT	20060329AAW	LIC
25A CO COLORADO SPRINGS	BDISDTL	20090203AAX	CP

After Analysis

Results for: 25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	685491	12135.0
not affected by terrain losses	674654	11742.0
lost to NTSC IX	0	0.0

Figure 3
Sheet 9 of 14

lost to additional IX by ATV 663526 10344.3
lost to ATV IX only 663526 10344.3
lost to all IX 663526 10344.3

Potential Interfering Stations Included in above Scenario 3

24A CO COLORADO SPRINGS BLCDDT 20060329AAW LIC
25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.0000%

Result key: 10
Scenario 4 Affected station 8 KZCS-LD
Before Analysis

Results for: 25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	685491	12135.0
not affected by terrain losses	674654	11742.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	663526	10344.3
lost to ATV IX only	663526	10344.3
lost to all IX	663526	10344.3

Potential Interfering Stations Included in above Scenario 4

24A CO COLORADO SPRINGS DTVPLN DTVP0869 PLN
25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP

After Analysis

Results for: 25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	685491	12135.0
not affected by terrain losses	674654	11742.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	663526	10344.3
lost to ATV IX only	663526	10344.3
lost to all IX	663526	10344.3

Potential Interfering Stations Included in above Scenario 4

24A CO COLORADO SPRINGS DTVPLN DTVP0869 PLN
25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.0000%
Worst case new IX 0.0000% Scenario 1

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Analysis of Interference to Affected Station 9

Analysis of current record

Channel	Call	City/State	Application Ref. No.
25	KZCS-LP	COLORADO SPRINGS CO	BDISDTL -20090203AAX

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
24	K57IL	ANTON CO	179.7	CP	BDISDTT -20090218ACD
24	K24HQ-D	BOULDER CO	143.4	LIC	BLDIT -20080612ACU
24	KRDO-TV	COLORADO SPRINGS CO	0.3	LIC	BLCDDT -20060329AAW
24	KRDO-TV	COLORADO SPRINGS CO	0.3	PLN	DTVPLN -DTV0869
25	KZCS-LD	COLORADO SPRINGS CO	0.0	CP	BDCDDTL -20060921ACL

Figure 3
Sheet 10 of 14

25 K25FZ GRAND JUNCTION CO 337.6 CP BDFCDTT -20060330AAQ
25 K25JU-D GARDEN CITY KS 363.7 CP BDCDDTL -20061030ASE
25 K25HJ HORNSBY RANCH, ETC. NM 422.9 CP BDFCDTT -20060327AGF
25 K25JT-D BLANDING/MONTICELLO UT 413.5 CP BDCDDTT -20061023AEG
26 K26IT-D REDSTONE, ETC. CO 210.6 CP BDCDDTT -20061030AAI
25 KPXH-LD FORT COLLINS CO 202.5 APP USERRECORD-01

Total scenarios = 4

Result key: 11
Scenario 1 Affected station 9 KZCS-LP
Before Analysis

Results for: 25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	726995	12772.1
not affected by terrain losses	712129	12211.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	688114	10416.1
lost to ATV IX only	688114	10416.1
lost to all IX	688114	10416.1

Potential Interfering Stations Included in above Scenario 1

24A CO COLORADO SPRINGS BLCDDT 20060329AAW LIC
25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP

After Analysis

Results for: 25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	726995	12772.1
not affected by terrain losses	712129	12211.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	688114	10416.1
lost to ATV IX only	688114	10416.1
lost to all IX	688114	10416.1

Potential Interfering Stations Included in above Scenario 1

24A CO COLORADO SPRINGS BLCDDT 20060329AAW LIC
25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP
25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.0000%

Result key: 12
Scenario 2 Affected station 9 KZCS-LP
Before Analysis

Results for: 25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	726995	12772.1
not affected by terrain losses	712129	12211.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	688141	10417.1
lost to ATV IX only	688141	10417.1
lost to all IX	688141	10417.1

Potential Interfering Stations Included in above Scenario 2

24A CO COLORADO SPRINGS DTVPLN DTVP0869 PLN
25A CO COLORADO SPRINGS BDCDDTL 20060921ACL CP

After Analysis

Results for: 25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	726995	12772.1
not affected by terrain losses	712129	12211.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	688141	10417.1
lost to ATV IX only	688141	10417.1
lost to all IX	688141	10417.1

Potential Interfering Stations Included in above Scenario 2

24A CO COLORADO SPRINGS	DTVPLN	DTVP0869	PLN
25A CO COLORADO SPRINGS	BDCDDTL	20060921ACL	CP
25A CO FORT COLLINS	USERRECORD01		APP

Percent new IX = 0.0000%

Result key: 13
Scenario 3 Affected station 9 KZCS-LP
Before Analysis

Results for: 25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	726995	12772.1
not affected by terrain losses	712129	12211.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	688114	10416.1
lost to ATV IX only	688114	10416.1
lost to all IX	688114	10416.1

Potential Interfering Stations Included in above Scenario 3

24A CO COLORADO SPRINGS	BLCDDTL	20060329AAW	LIC
25A CO COLORADO SPRINGS	BDCDDTL	20060921ACL	CP

After Analysis

Results for: 25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	726995	12772.1
not affected by terrain losses	712129	12211.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	688114	10416.1
lost to ATV IX only	688114	10416.1
lost to all IX	688114	10416.1

Potential Interfering Stations Included in above Scenario 3

24A CO COLORADO SPRINGS	BLCDDTL	20060329AAW	LIC
25A CO COLORADO SPRINGS	BDCDDTL	20060921ACL	CP
25A CO FORT COLLINS	USERRECORD01		APP

Percent new IX = 0.0000%

Result key: 14
Scenario 4 Affected station 9 KZCS-LP
Before Analysis

Results for: 25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	726995	12772.1
not affected by terrain losses	712129	12211.6
lost to NTSC IX	0	0.0

lost to additional IX by ATV	688141	10417.1
lost to ATV IX only	688141	10417.1
lost to all IX	688141	10417.1

Potential Interfering Stations Included in above Scenario 4

24A CO COLORADO SPRINGS	DTVPLN	DTVP0869	PLN
25A CO COLORADO SPRINGS	BDCDDTL	20060921ACL	CP

After Analysis

Results for: 25A CO COLORADO SPRINGS BDISDTL 20090203AAX CP
HAAT 1.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	726995	12772.1
not affected by terrain losses	712129	12211.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	688141	10417.1
lost to ATV IX only	688141	10417.1
lost to all IX	688141	10417.1

Potential Interfering Stations Included in above Scenario 4

24A CO COLORADO SPRINGS	DTVPLN	DTVP0869	PLN
25A CO COLORADO SPRINGS	BDCDDTL	20060921ACL	CP
25A CO FORT COLLINS	USERRECORD01		APP

Percent new IX = 0.0000%
Worst case new IX 0.0000% Scenario 1

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Analysis of Interference to Affected Station 23

Channel	Call	City/State	Application Ref. No.
26	K63AB	LONGMONT CO	BDISDTL -20070703ABO

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
18	KRMA-TV	DENVER CO	27.4	CP	BPEDT -20080617ACF
18	KRMA-TV	DENVER CO	27.6	PLN	DTVPLN -DTVP0630
18	KRMA-TV	DENVER CO	27.4	APP	BMPEDT -20080825AAI
19	KTVD	DENVER CO	21.0	PLN	DTVPLN -DTVP0663
19	KTVD	DENVER CO	20.9	CP	BPCDDT -20080617ACA
22	KXRM-TV	COLORADO SPRINGS CO	135.0	LIC	BLCDDT -20030702ABE
22	KXRM-TV	COLORADO SPRINGS CO	135.0	PLN	DTVPLN -DTVP0789
23	KCDO	STERLING CO	116.1	APP	BMPDDT -20080602AJL
24	KRDO-TV	COLORADO SPRINGS CO	135.0	LIC	BLCDDT -20060329AAW
24	KRDO-TV	COLORADO SPRINGS CO	135.0	PLN	DTVPLN -DTVP0869
25	KZCS-LD	COLORADO SPRINGS CO	135.0	CP	BDCDDTL -20060921ACL
25	KZCS-LP	COLORADO SPRINGS CO	135.0	CP	BDISDTL -20090203AAX
26	NEW	ASPEN CO	151.3	APP	BNPTTL -20000831EKR
26	K26GY	BRECKENRIDGE CO	74.1	LIC	BLTTL -20060928AGU
26	K26CI-D	CORTEZ, ETC CO	376.3	LIC	BLDDT -20090522ACD
26	K26HQ	ESTES PARK CO	53.3	LIC	BLTTL -20070525ADX
26	K26IT-D	REDSTONE, ETC. CO	181.1	CP	BDCDDTT -20061030AAI
26	K26FK	RULISON CO	231.6	LIC	BLTT -20010911AAD
26	K26EP	DULCE & LUMBERTON NM	356.9	CP	BDFDDTT -20060324AAK
27	KZCO-LP	DENVER CO	27.4	LIC	BLTTL -20050223ABM
27	K27CB	FRASER, ETC. CO	41.3	LIC	BLTT -19890609IM
27	K61DC	PARLIN CO	196.7	APP	BDISDTT -20090602ACH
27	KLWY	CHEYENNE WY	130.7	CP MOD	BMPDDT -20080618ABI
27	KLWY	CHEYENNE WY	130.7	PLN	DTVPLN -DTVP1018
29	KDEN	LONGMONT CO	39.3	PLN	DTVPLN -DTVP1061
29	KDEN	LONGMONT CO	39.3	CP	BPCDDT -20080623AAA
29	KDEN	LONGMONT CO	39.3	LIC	BLCDDT -20060630ACM

**Figure 3
Sheet 13 of 14**

30	KGWN-TV	CHEYENNE WY	134.1	CP MOD	BMPCDT	-20060707ADA
30	KGWN-TV	CHEYENNE WY	134.1	PLN	DTVPLN	-DTVP1123
34	KWGN-TV	DENVER CO	20.6	PLN	DTVPLN	-DTVP1244
34	KWGN-TV	DENVER CO	20.6	CP MOD	BMPCDT	-20080620AFA
40	KRMT	DENVER CO	35.6	PLN	DTVPLN	-DTVP1426
40	KRMT	DENVER CO	35.6	CP	BPEDT	-20080619AAR
40	KRMT	DENVER CO	35.6	LIC	BLEDT	-20061221ACX
41	K41JO	BROADMOOR CO	125.9	CP	BDFCDTL	-20090515ACB
41	K43FN	FORT COLLINS CO	70.8	CP	BDISTTL	-20080312AAD
25	KPXH-LD	FORT COLLINS CO	71.1	APP	USERRECORD-01	

Total scenarios = 1

Result key: 15
Scenario 1 Affected station 23 K63AB
Before Analysis

Results for: 26N CO LONGMONT BDISTTL 20070703ABO CP

	POPULATION	AREA (sq km)
within Noise Limited Contour	495878	2618.5
not affected by terrain losses	493763	2559.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

After Analysis

Results for: 26N CO LONGMONT BDISTTL 20070703ABO CP

	POPULATION	AREA (sq km)
within Noise Limited Contour	495878	2618.5
not affected by terrain losses	493763	2559.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	6	1.0
lost to all IX	6	1.0

Potential Interfering Stations Included in above Scenario 1

25A CO FORT COLLINS USERRECORD01 APP

Percent new IX = 0.0012%
Worst case new IX 0.0012% Scenario 1

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Analysis of Interference to Affected Station 47

Analysis of current record

Channel	Call	City/State	Application Ref. No.
25	KPXH-LD	FORT COLLINS CO	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
24	K57IL	ANTON CO	175.2	CP	BDISDTT -20090218ACD
24	K24HQ-D	BOULDER CO	61.2	LIC	BLDTT -20080612ACU
25	KZCS-LD	COLORADO SPRINGS CO	202.5	CP	BDCDCTL -20060921ACL
25	KZCS-LP	COLORADO SPRINGS CO	202.5	CP	BDISDTL -20090203AAX
25	K25FZ	GRAND JUNCTION CO	344.8	CP	BDFCDTT -20060330AAQ
25	K57CZ	NORTH PLATTE NE	378.9	CP	BDISDTT -20061208AAV
25	K57CZ	NORTH PLATTE NE	378.9	APP	BDISDTT -20060329ANI
25	KHDE-LP	LARAMIE WY	64.0	LIC	BLTTL -20080124AES
26	K26HQ	ESTES PARK CO	34.5	LIC	BLTTL -20070525ADX
26	K26IT-D	REDSTONE, ETC. CO	225.6	CP	BDCDCTL -20061030AAI

Total scenarios = 1

**Figure 3
Sheet 14 of 14**

Result key: 16
Scenario 1 Affected station 47 KPXH-LD
Before Analysis

Results for: 25A CO FORT COLLINS USERRECORD01 APP

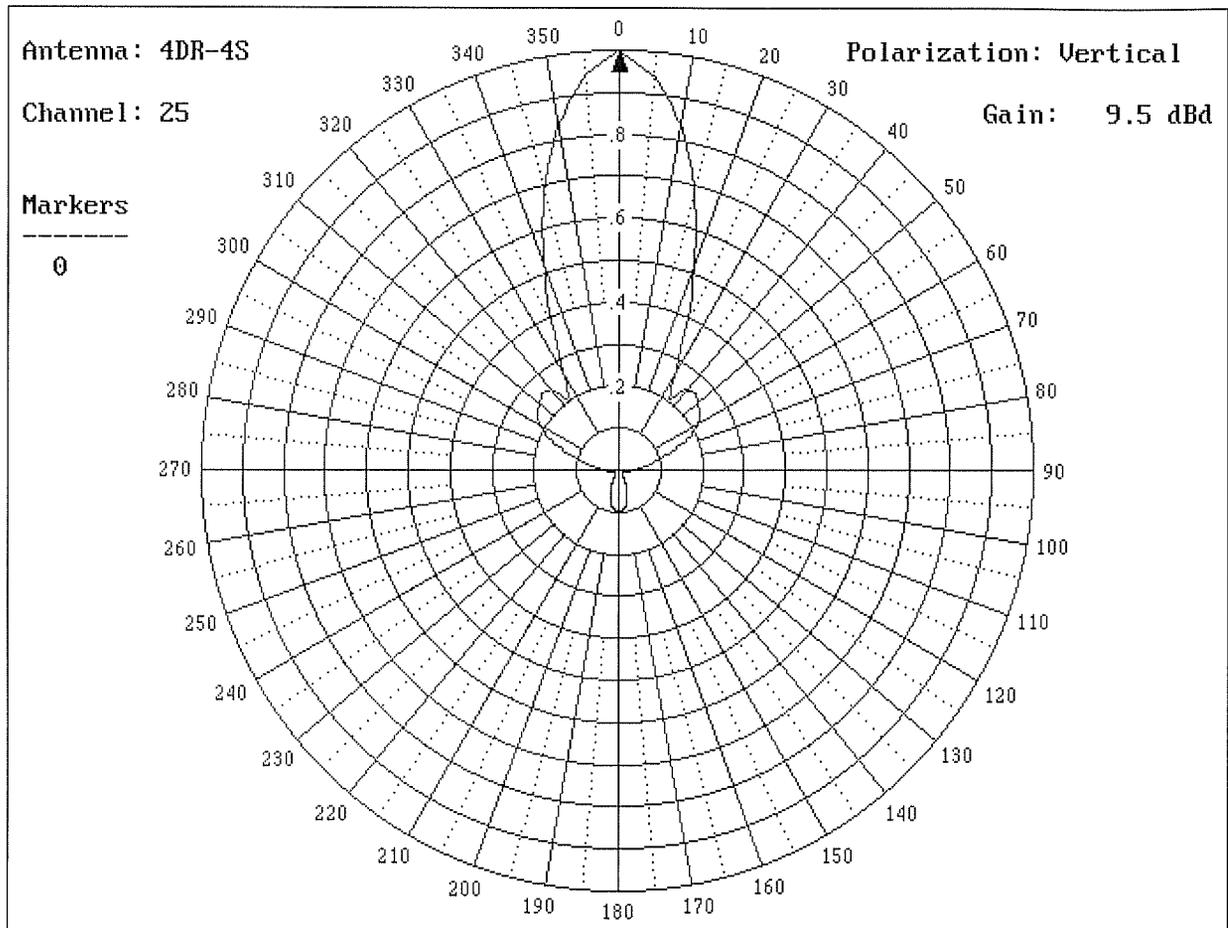
HAAT 389.0 m, ATV ERP 15.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	437560	6984.7
not affected by terrain losses	436712	6862.1
lost to NTSC IX	250	6.0
lost to additional IX by ATV	4	8.0
lost to ATV IX only	16	10.0
lost to all IX	254	13.9

Potential Interfering Stations Included in above Scenario 1

25N WY LARAMIE	BLTTL	20080124AES	LIC
25A CO COLORADO SPRINGS	BDCDCTL	20060921ACL	CP
25A CO COLORADO SPRINGS	BDISDTL	20090203AAX	CP

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KPXH-LP



K48CG

TABULATED DATA FOR ELEVATION PATTERN TYPE ALP16L2

ANGLE	RELATIVE FIELD	dB	ANGLE	RELATIVE FIELD	dB	ANGLE	RELATIVE FIELD	dB	ANGLE	RELATIVE FIELD	dB
-5° TO 10° IN 0.25° INCREMENTS			10° TO 90° IN 0.5° INCREMENTS								
-5.00	0.025	-32.10	10.00	0.224	-12.98	40.00	0.044	-27.05	70.00	0.054	-25.34
-4.75	0.088	-21.12	10.50	0.281	-11.04	40.50	0.054	-25.30	70.50	0.056	-24.98
-4.50	0.157	-16.11	11.00	0.306	-10.30	41.00	0.066	-23.63	71.00	0.062	-24.13
-4.25	0.219	-13.19	11.50	0.295	-10.62	41.50	0.071	-22.96	71.50	0.071	-23.03
-4.00	0.271	-11.33	12.00	0.253	-11.95	42.00	0.068	-23.33	72.00	0.080	-21.90
-3.75	0.310	-10.18	12.50	0.192	-14.34	42.50	0.057	-24.85	72.50	0.091	-20.84
-3.50	0.332	-9.57	13.00	0.126	-17.97	43.00	0.040	-27.90	73.00	0.101	-19.92
-3.25	0.337	-9.44	13.50	0.069	-23.17	43.50	0.020	-34.00	73.50	0.110	-19.14
-3.00	0.326	-9.74	14.00	0.030	-30.31	44.00	0.005	-46.47	74.00	0.119	-18.50
-2.75	0.302	-10.41	14.50	0.013	-37.71	44.50	0.021	-33.39	74.50	0.126	-17.98
-2.50	0.273	-11.27	15.00	0.005	-45.54	45.00	0.036	-28.84	75.00	0.132	-17.58
-2.25	0.256	-11.83	15.50	0.006	-44.33	45.50	0.045	-26.87	75.50	0.137	-17.28
-2.00	0.271	-11.34	16.00	0.018	-34.66	46.00	0.048	-26.29	76.00	0.140	-17.08
-1.75	0.326	-9.73	16.50	0.025	-31.95	46.50	0.046	-26.74	76.50	0.142	-16.97
-1.50	0.412	-7.70	17.00	0.022	-33.32	47.00	0.039	-28.08	77.00	0.142	-16.94
-1.25	0.514	-5.77	17.50	0.007	-43.15	47.50	0.031	-30.07	77.50	0.142	-16.98
-1.00	0.622	-4.13	18.00	0.018	-34.88	48.00	0.026	-31.86	78.00	0.140	-17.09
-0.75	0.726	-2.79	18.50	0.044	-27.15	48.50	0.025	-31.90	78.50	0.137	-17.27
-0.50	0.819	-1.73	19.00	0.065	-23.77	49.00	0.029	-30.66	79.00	0.133	-17.51
-0.25	0.897	-0.94	19.50	0.074	-22.57	49.50	0.033	-29.64	79.50	0.129	-17.80
0.00	0.955	-0.40	20.00	0.071	-23.02	50.00	0.034	-29.43	80.00	0.124	-18.14
0.25	0.990	-0.09	20.50	0.061	-24.27	50.50	0.031	-30.23	80.50	0.118	-18.54
0.50	1.000	0.00	21.00	0.071	-22.98	51.00	0.024	-32.33	81.00	0.112	-18.99
0.75	0.985	-0.13	21.50	0.109	-19.22	51.50	0.015	-36.72	81.50	0.106	-19.49
1.00	0.945	-0.49	22.00	0.158	-16.03	52.00	0.003	-49.97	82.00	0.100	-20.03
1.25	0.882	-1.09	22.50	0.201	-13.93	52.50	0.009	-41.18	82.50	0.093	-20.63
1.50	0.800	-1.93	23.00	0.230	-12.78	53.00	0.020	-34.08	83.00	0.086	-21.28
1.75	0.703	-3.06	23.50	0.238	-12.47	53.50	0.029	-30.82	83.50	0.080	-21.98
2.00	0.595	-4.50	24.00	0.225	-12.96	54.00	0.035	-29.15	84.00	0.073	-22.74
2.25	0.485	-6.29	24.50	0.193	-14.28	54.50	0.038	-28.52	84.50	0.066	-23.56
2.50	0.379	-8.42	25.00	0.149	-16.52	55.00	0.037	-28.70	85.00	0.060	-24.46
2.75	0.291	-10.72	25.50	0.102	-19.86	55.50	0.033	-29.59	85.50	0.053	-25.45
3.00	0.237	-12.52	26.00	0.061	-24.26	56.00	0.028	-30.98	86.00	0.047	-26.54
3.25	0.228	-12.82	26.50	0.044	-27.21	56.50	0.025	-32.11	86.50	0.041	-27.77
3.50	0.254	-11.89	27.00	0.049	-26.19	57.00	0.026	-31.62	87.00	0.035	-29.17
3.75	0.291	-10.74	27.50	0.055	-25.23	57.50	0.033	-29.74	87.50	0.029	-30.81
4.00	0.320	-9.89	28.00	0.052	-25.72	58.00	0.041	-27.75	88.00	0.023	-32.79
4.25	0.336	-9.47	28.50	0.041	-27.82	58.50	0.049	-26.23	88.50	0.017	-35.33
4.50	0.335	-9.49	29.00	0.025	-31.94	59.00	0.055	-25.24	89.00	0.011	-38.88
4.75	0.317	-9.98	29.50	0.010	-39.92	59.50	0.058	-24.78	89.50	0.006	-44.91
5.00	0.283	-10.96	30.00	0.002	-52.17	60.00	0.057	-24.83	90.00	0.000	-99.99
5.25	0.236	-12.54	30.50	0.008	-42.21	60.50	0.054	-25.43			
5.50	0.179	-14.96	31.00	0.008	-42.34	61.00	0.046	-26.67			
5.75	0.115	-18.78	31.50	0.003	-50.10	61.50	0.036	-28.78			
6.00	0.051	-25.93	32.00	0.003	-49.97	62.00	0.024	-32.34			
6.25	0.027	-31.25	32.50	0.009	-41.40	62.50	0.011	-39.29			
6.50	0.082	-21.68	33.00	0.012	-38.59	63.00	0.007	-42.85			
6.75	0.134	-17.43	33.50	0.017	-35.59	63.50	0.021	-33.69			
7.00	0.177	-15.05	34.00	0.029	-30.66	64.00	0.035	-29.23			
7.25	0.207	-13.68	34.50	0.050	-26.04	64.50	0.047	-26.52			
7.50	0.224	-12.99	35.00	0.075	-22.49	65.00	0.058	-24.75			
7.75	0.228	-12.83	35.50	0.101	-19.93	65.50	0.066	-23.58			
8.00	0.220	-13.14	36.00	0.123	-18.20	66.00	0.072	-22.86			
8.25	0.202	-13.87	36.50	0.138	-17.20	66.50	0.075	-22.50			
8.50	0.178	-14.98	37.00	0.144	-16.86	67.00	0.075	-22.46			
8.75	0.154	-16.25	37.50	0.138	-17.19	67.50	0.073	-22.69			
9.00	0.138	-17.20	38.00	0.123	-18.23	68.00	0.069	-23.16			
9.25	0.140	-17.10	38.50	0.099	-20.07	68.50	0.064	-23.81			
9.50	0.160	-15.94	39.00	0.073	-22.79	69.00	0.059	-24.54			
9.75	0.190	-14.40	39.50	0.050	-25.96	69.50	0.055	-25.14			