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DIGITAL LPTV FACILITY MINOR CHANGE APPLICATION K35GU-LD TELEVISION CHANNEL 35

APPLICATION ENGINEERING STATEMENT

FCC FACILITY ID: 130964
RUIDOSO, NEW MEXICO

ENGINEERING NARRATIVE

Minor Change Application

K35GU, seeks to MODIFY its current license facility to CORRECT the antenna site location and increase its effective radiated power (ERP), using the existing antenna system. No change in the antenna type or directional pattern will occur. The applicant simply seeks to increase radiated power (ERP) from 0.550 kW to 5.0 kW (550 watts to 5,000 watts) using horizontal polarization only.

The proposed (and current licensed) antenna is a SCA “3X4DR-4-2HN” a directional UHF panel antenna, employing 0-degrees of electrical beam tilt. A full-service filter mask is to be employed.

The facility requested is not contingent upon a grant or channel move of any other known facility at the time of filing.

A graphical plot, and the tabulation of the relative field values from the proposed directional antenna have been provided in the application.

Modification Compliance:

Pursuant to 47 CFR §74.787(b) the instant application is considered a “minor” change because;

- There is no change in transmitting antenna location such that the protected service contour resulting from the change does not overlap some portion of the protected service contour of the authorized facilities of the existing station as illustrated in Figure 1, Present & Proposed Service Contours.
- There is no change in transmitting antenna location greater than 30 miles (48 km) from the reference coordinates of the existing station’s licensed location, as noted below:
-

TRANSMITTER SITE COORDINATE CORRECTION
CALCULATED DISTANCE BETWEEN EXISTING LICENSED AND PROPOSED SITES

SITE	LAT (NAD83)	LON (NAD83)	(KM)	(MI)
CURRENT/EXISTING LIC	33-24-14.2 N	105-46-56.9 W	0.116	0.072
PROPOSED (CP APP)	33-24-17.5 N	105-46-54.7 W		

FCC Tower Registration (ASR) - FAA Notification NOT required:

The proposed site is an existing well-developed communication site located atop Buck Mountain. The supporting structure is a self-supporting tower of less than 61 meters (200 feet) and does not require FAA notification.

The tower passes the FCC/FAA tower-airport slope criteria. FCC antenna structure registration (ASR) is NOT required. The overall height of the structure is 58.0 meters (190 feet) above ground level.

No changes in the supporting structure are required that would require notification to the FAA. The antenna is side-mounted upon the structure. This is simply a power increase application.

Antenna Elevations:

The center of radiation of the proposed antenna is 55.6 meters AGL, 3,338.6 meters AMSL. The ground elevation at the site is 3,283.0 meters.

Antenna/Structure Elevations	
Site Elevation (m)	3283.0
Overall Height of Structure (m)	58.0
Antenna Radiation Center AGL (m)	55.6
Antenna Radiation Center AMSL (m)	3338.6

FCC TVStudy Results:

FCC TVStudy Cell Size 1.0 km, Profile Spacing 1.0 km

The results of an interference study of the proposal using the FCC TVStudy program (Version 2.2.5), shows that no prohibitive interference will occur from the proposal. A copy of the summary report has been included in this application.

International Coordination with Mexico:

The proposal is within the Mexico coordination distance at 192.8 kilometers from the common border between Mexico and the United States. This is a previously coordinated facility, and is in compliance with the treaty between Mexico and the United States, with regards to power limits and interference levels within the coordination distance. The FCC TVStudy program reports no prohibited interference to Mexican co-channel or adjacent channels within Mexico.

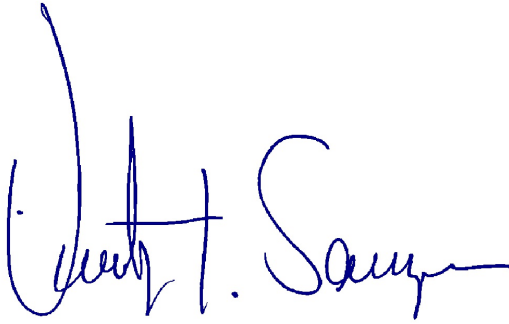
The applicant accepts any incoming interference that is predicted to exist to the proposed facility by any authorized or pending, primary or secondary TV station at the time this application is submitted.

Environmental Evaluation Statement:

The environmental evaluation statement concerning this proposal has been included in this application and can be found as a separate file upload within the application. A grant of this proposal would NOT be an action which would have a significant environmental effect as demonstrated in the environmental evaluation statement.

Respectfully submitted,

August 12, 2022

A handwritten signature in blue ink, reading "Timothy Z. Sawyer". The signature is fluid and cursive, with a large initial "T" and "S".

Timothy Z. Sawyer, Consulting Engineer

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K35GU-LD APP

FCC LMS File:
FCC Facility ID: 130964
NAD 83 Latitude: 33-24-17.50 N
NAD 83 Longitude: 105-46-54.70 W
ERP: 5.00 kW
Channel: 35
Frequency: 599.0 MHz
Ant. RCAMSL Height: 3338.6 m
Horiz. Pattern: Directional

K35GU-LD LICENSED

FCC LMS File: BLDTT-20140506AAP
FCC Facility ID: 130964
NAD 83 Latitude: 33-24-14.20 N
NAD 83 Longitude: 105-46-56.90 W
ERP: 0.55 kW
Channel: 35
Frequency: 599.0 MHz
Ant. RCAMSL Height: 3331.6 m
Horiz. Pattern: Directional

K35GU-LD EXISTING AND PROPOSED
FCC 51 DBU F(50,90) SERVICE CONTOURS
MINOR CHANGE COMPLIANCE

FIGURE 1

FCC 51 DBU F(50,90)

FCC 30 MILE RADIUS MOVE LIMIT
MINOR CHANGE RULES

EXISTING (LICENSED)
PROPOSE (APP)
CONTOUR OVERLAP REGION

K35GU-LD APP
K35GU-LD LICENSED

Ruidoso

Lincoln

Roswell
Chave

Alamogordo

TZSTC
2022

AUGUST

Map created on: 8/12/2022
NED 3 Second US Terrain

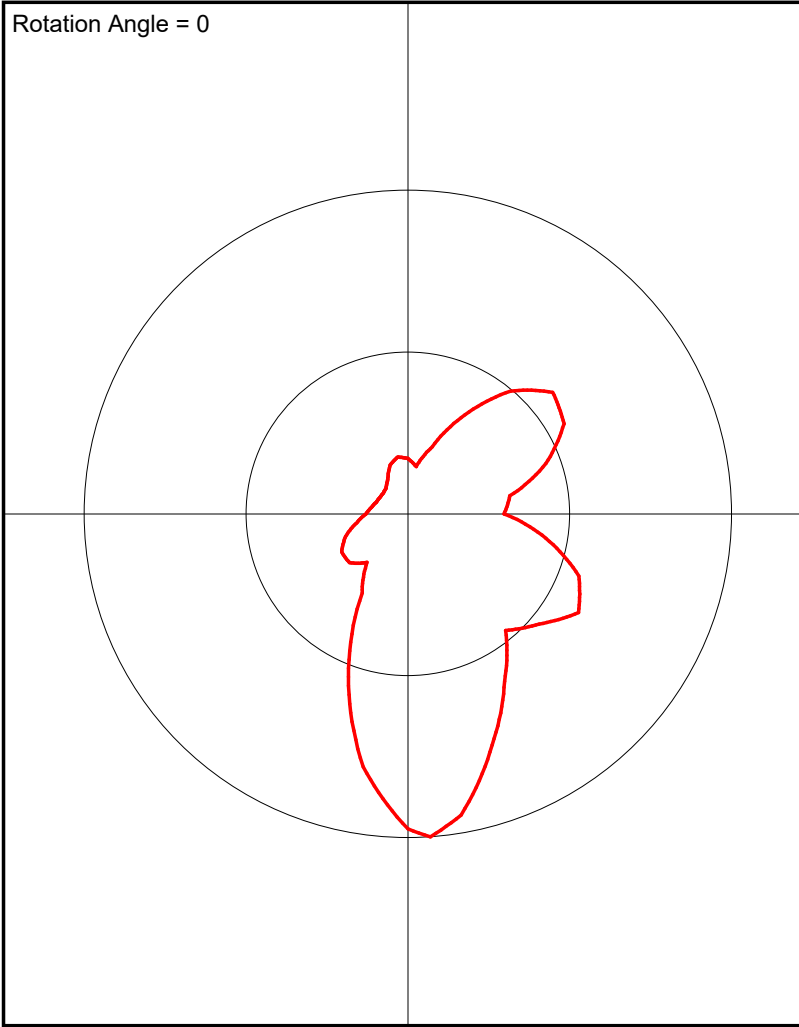
Scale 1:1,000,000

0 20 40 60 km

K35GU Antenna Pattern SCA 3X4DR-4-2HN

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	0.171
10.0	0.148
20.0	0.22
30.0	0.353
40.0	0.495
50.0	0.584
60.0	0.557
70.0	0.454
80.0	0.32
90.0	0.297
100.0	0.433
110.0	0.562
120.0	0.609
130.0	0.529
140.0	0.47
150.0	0.597
160.0	0.76
170.0	0.945
176.0	1.0
180.0	0.973
190.0	0.793
200.0	0.536
210.0	0.282
220.0	0.196
230.0	0.235
240.0	0.236
250.0	0.205
260.0	0.16
270.0	0.129
280.0	0.114
290.0	0.104
300.0	0.1
310.0	0.099
320.0	0.104
330.0	0.123
340.0	0.16
350.0	0.178



FCC TVSTUDY SUMMARY REPORT

Study build station data: LMS TV 2022-08-11

Proposal: K35GU-LD D35 LD APP RUIDOSO, NM
File number: K35GU - APP 5KW
Facility ID: 130964
Station data: User record
Record ID: 624
Country: U.S.

Build options:
Protect pre-transition records not on baseline channel

Search options:

Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K20HA-D	N20z	TX	LIC	CABALLO, NM	BLTT20050202ADM	142.5 km
No	KCWF-LP	N20+	TX	LIC	LAS CRUCES, NM	BLTTL20110415AAC	143.9
No	DDDK28HB	N28+	TX	APP	ALAMOGORDO, NM	BLTTL20010801ALG	64.5
No	K34CR-D	D34	LD	LIC	ALAMOGORDO, ETC., NM	BLANK0000139141	64.7
No	K34CR-D	N34	TX	LIC	ALAMOGORDO, ETC., NM	BLTT19890703IB	64.7
No	K38IM	D34+	LD	CP	ALBUQUERQUE, NM	BLANK0000195613	210.2
No	DDK34FU	N34-	TX	APP	ARREY & DERRY, NM	BLTT20040325ACF	142.5
No	K34QU-D	D34	LD	CP	MAGDALENA, NM	BNPDTL20100513AEA	129.8
Yes	KNME-TV	D35	DT	LIC	ALBUQUERQUE, NM	BLANK0000131933	210.1
No	K35JR-D	D35	LD	LIC	ARREY & DERRY, NM	BLDTT20110902AAQ	142.5
No	K35HB-D	D35	LD	LIC	DEMING, NM	BLDTT20110824ABW	217.3
No	K35FP	D35	LD	LIC	TUCUMCARI, NM	BLANK0000001694	271.1
No	KJTV-TV	D35	DT	LIC	LUBBOCK, TX	BLANK0000074582	362.7
No	DDKKNJ-LP	N36	TX	APP	ALAMOGORDO, NM	BLTT19890606IQ	64.7
No	KASY-TV	D36	LD	LIC	ALBUQUERQUE, NM	BLANK0000145221	210.2
No	K36QF-D	D36	LD	CP	MAGDALENA, NM	BNPDTL20100513AEB	129.8
No	XHCJE	D34	DT	LIC	CIUDAD JUAREZ, CH	BLANKBPFS20160224AAV	204.7
Yes	XEJ	D35	DT	LIC	CIUDAD JUAREZ, CH	BLANKBPFS20160304AAH	204.6
No	XHBVT	D35	DT	LIC	SAN BUENAVENTURA, CH	BLANKBPFS20160304AAQ	426.8
No	XHCJH	D36	DT	LIC	CIUDAD JUAREZ, CH	BLANKBPFS20160226AAH	204.7

No non-directional AM stations found within 0.8 km
No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D35
Mask: Full Service
Latitude: 33 24 17.50 N (NAD83)
Longitude: 105 46 54.70 W
Height AMSL: 3338.6 m
HAAT: 0.0 m
Peak ERP: 5.00 kW
Antenna: SCA-3X4DR-4-2HN 0.0 deg
Elev Pattn: Generic

50.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.146 kW	799.7 m	41.8 km
45.0	1.46	996.4	59.6
90.0	0.441	1008.7	52.1
135.0	1.25	1019.3	58.9
180.0	4.73	684.4	62.2
225.0	0.232	738.5	43.6
270.0	0.083	1179.5	43.2
315.0	0.052	916.4	37.1

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 918 m

Distance to Canadian border: 1733.4 km

****Proposal is within coordination distance of Mexican border**
Distance to Mexican border: 192.8 km

Conditions at FCC monitoring station: Douglas AZ

Bearing: 240.8 degrees Distance: 420.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 3.5 degrees Distance: 747.6 km

Study cell size: 1.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

Proposal causes 0.01% interference to BLANK0000131933 LIC scenario 1

Proposal causes 0.00% interference to BLANKBPFS20160304AAH LIC scenario 1

---- Below is IX received by proposal K35GU - APP 5KW ----

Proposal receives 0.44% interference from scenario 1

No IX check failures found.

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DIGITAL LPTV FACILITY
MINOR CHANGE APPLICATION
K35GU-LD
TELEVISION CHANNEL 35
FCC FACILITY ID: 139064
RUIDOSO, NEW MEXICO

ENVIRONMENTAL EVALUATION STATEMENT

A grant of this proposal would NOT be an action which would have a significant environmental effect as demonstrated in this environmental evaluation statement. Any changes in equipment, or construction, if necessary will not trigger any event with regards to Section 106 of the National Historical Preservation Act (NHPA).

The proposal does not meet any of the criteria specified in Section 1.1307 of the FCC Rules. More specifically, the proposed facilities are not known to fall within any of the categories enumerated in Sections 1.1307(a)(1)-(7) and will not involve the use of high intensity white lights. Furthermore, operation of the proposed facility will not involve the exposure of workers or the general public to levels of radio frequency electromagnetic fields exceeding guidelines adopted by the Federal Communications Commission. (The current FCC guidelines are based upon criteria contained in the National Council of Radiation Protection and Measurements (NCRP) Report No.86 (1986) and ANSI/IEEE C95.1-1992.)

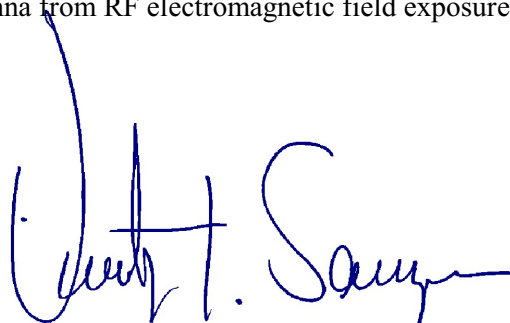
CALCULATED POWER DENSITY AT 2 METERS AGL (0.3 ANTENNA RELATIVE FIELD VALUE) ERP MAX (H)

CR AGL 53.6 M ERP MAX 5.0 KW (H)	MPE ($\mu\text{W}/\text{CM}^2$)	CALCULATED VALUE ($\mu\text{W}/\text{CM}^2$)	% OF MPE	PASS/FAIL
CONTROLLED AREA	1996.7	5.6449	0.28%	PASS
PUBLIC AREA	399.3		1.41%	PASS

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs are posted at the site. The applicant will coordinate exposure procedures with any co-located facilities and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

August 12, 2022

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