

Technical Report Supporting a Minor Modification of a Licensed Facility Construction Permit Application

Pursuant to 47 C.F.R. Section 73:

for

*KLOX(FM).L – Creston, IA
(Facility ID: 91587)*

*Change to a New Site Location
and increase to Class C1 Status*

*as a
Class C1, NCE-FM Facility on
CH215C1 (90.9 MHz)*

Table of Contents

Table of Contents

Explanation of Technical Report

Exhibit 1 - Service Contour Study: Present vs Proposed Operations

Exhibit 2 - Service Contour Study: Proposed Longley-Rice Method *(for illustrative purposes only)*

Exhibit 3 - Copy of Existing Antenna Structure Registration

Exhibit 4 - Vertical Plan of Antenna System and Support Tower

Exhibit 5 - HAAT Calculation & Miscellaneous Coordinate Information

Exhibit 6 - Tabulation of Proposed Non-Commercial Allocation

Exhibit(s) 7(a-c) - §73.509 Contour Protection Studies Toward Select Station(s)

Supplemental Appendixes:

RF Appendix 1 - Radio Frequency Radiation Compliance Showing

EXPLANATION OF PROPOSAL: This Minor Modification of a Licensed Facility Construction Permit Application and accompanying Technical Report supports a minor change for NCE-FM Station KLOX(FM).L – Creston, IA (Facility ID: 91587). This FCC Schedule 340-NCE-FM filing requests a change to a new site location and increase to Class C1 status. Continued operation on the present NCE-FM channel but increase in class to CH215C1 (90.9 MHz) with 100.0 kW ERP (Circular Polarization) is requested. From the new site, operation with an antenna COR height of 482.0 meters AMSL, 81.5 meters AGL (100.9 meters HAAT) is requested. The facility will employ a non-directional antenna. The facility will continue specifying service to the community of Creston, IA.

FACILITY COMPLIANCE SHOWINGS: A map of the proposed 60 dBμ service contour in relation to the present 60 dBμ service contour has been included in ***Exhibit 1***. The minor change proposed service area will overlap a portion of the present service area as noted in the exhibit. In addition, this exhibit demonstrates NCE-FM grade service of 1.0 mV/m, or 60 dBμ F(50:50), to visually more than 50% of the community of license, as allowed per 47 C.F.R. Section 73.515. In this instance, 100% community coverage will be attained.

A Longley-Rice coverage map of the proposed operation has been plotted in ***Exhibit 2***. The applicant acknowledges this map has been provided for illustrative purposes only.

The proposed facility will be located on the tower bearing Antenna Structure Registration Number 1015413. In support of this filing, a copy of the current ASRN has been included in ***Exhibit 3***. A depiction of the tower and antenna configuration has been included in ***Exhibit 4***. Further notification to the FAA or ASR governing authorities is not required as this proposal will not increase the overall tower height.

The applicant would like to note use of the FCC 30 second terrain database for all allocation, contour and HAAT showings contained herein. A copy of the proposed HAAT calculation has been included in ***Exhibit 5***. In addition, the requested Class C1 power of 100.0 kW ERP has been verified accurate for the proposed 100.9 meter HAAT value also as noted in ***Exhibit 5***.

ALLOCATION COMPLIANCE SHOWINGS: The proposed full service NCE-FM site will meet all class contour protection requirements of 47 C.F.R. Section 73.509 toward each allocation protection. A tabulation of the proposed NCE-FM allocation is found in **Exhibit 6**. There are three (3) allocation concerns deemed close enough to require further study. Therefore, maps and/or tabulations of the relevant protected and interference contours toward these concerns have been supplied in **Exhibit(s) 7(a-c)**. It is believed sufficient clearance exists precluding the need for further study. However, additional tabulations or maps will be supplied upon request.

The transmitter site is located more than 320 km from the common border of the United States and Canada or Mexico. As a result, full protection will be afforded all international concerns as noted in the **Exhibit 6** allocation study.

The transmitter site is not located within the affected radius of any TV6 facility. Therefore, full protection will be afforded all TV6 concerns as noted in **Exhibit 6**.

The remainder of the information in this report is responsive to the Rules of the Commission, and provides the data for the FCC's online master LMS (Licensing and Management System) Form 2100 - Schedule 340-FM.

ENVIRONMENTAL COMPLIANCE SHOWINGS: The proposed facility complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments as set forth under §1.1310 and/or §1.1307(b)(3) of the Commission's rules and the guidelines for RF radiation protection as set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01). Compliance has been demonstrated in the attached **RF Appendix 1** of this filing. The facility is, or will be, properly marked with signs. Entry is, or will be, restricted by means of fencing with locked doors or gates. In addition, coordination with other users of the site will be secured to reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

Regarding compliance with the NEPA, Nationwide Programmatic Agreement and NHPA Section 106 for tower co-location, compliance with the Agreement is not required where no new tower construction is being proposed and the tower is not being substantially altered. Specifically, compliance is not necessary where only an antenna and feedline are being added to an existing structure. However, should the Commission determine compliance is necessary, upon notification to the applicant, the applicant will file FCC Form 621.

CERTIFICATION OF TECHNICAL CONSULTANT: *I declare, under penalty of perjury, that the contents of this report are true and accurate to the best of my knowledge and belief. I further certify I have over twenty-four years of experience as a broadcast technical consultant before the Federal Communications Commission ("the FCC"); and am familiar with the Code of Federal Regulations Title 47 ("the Rules") as pertaining to this report and its contents herein. The underlying data utilized in this report was taken directly from FCC databases or indirectly through third party software vendors securing data directly from FCC databases. This firm cannot be held liable for errors or omissions resulting from the underlying data. The information contained herein is believed accurate to the date reported below.*



Justin W. Asher
Technical Consultant
January 5, 2023

Exhibit 1
Service Contour Study:
Present vs Proposed Operations

Proposed 60 dBμ F(50:50) Contour

Present 60 dBμ F(50:50) Contour

KLOX.L KLOX.P

Creston

KLOX.L
Creston, IA
0000149549
Facility ID: 91587
Latitude: 41-03-20 N
Longitude: 094-22-13.80 W
ERP: 0.50 kW
Channel: 215A (90.9 MHz)
AMSL Height: 420.0 m
Horiz. Pattern: Omni

60 dBμ F(50:50) Contour
Total Population: 8,765
Total Area: 271.5 sq. km

KLOX.P
Creston, IA
Proposed Operation
Facility ID: 91587
Latitude: 41-04-38 N
Longitude: 094-19-10 W
ERP: 100.00 kW
Channel: 215C1 (90.9 MHz)
AMSL Height: 482.0 m
Horiz. Pattern: Omni

60 dBμ F(50:50) Contour
Total Population: 58,547
Total Area: 8,140.8 sq. km

Terrain
201 470 m

All
FCC 30 SEC Terrain Database
US Census 2020 PL Database
NAD 1983 Coordinate Datum

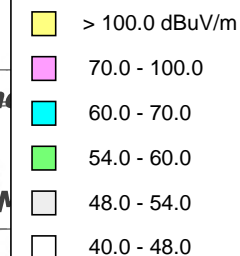
Asher Broadcast Consulting LLC
justinasher@consultant.com
1 (202) 875-2986

Scale 1:675,000
0 10 20 30 km

non-FCC-sanctioned coverage map
for illustrative purposes only

FCC 30 SEC Terrain Database
US Census 2020 PL Database
NAD 1983 Coordinate Datum

Exhibit 2 Service Contour Study: Proposed Longley-Rice Method



KLOX.P
Creston, IA
Facility ID: 91587
Proposed Operation
Channel: 215C1 (90.9 MHz)
Latitude: 41-04-38 N
Longitude: 094-19-10 W
AMSL Height: 482.0 m
ERP: 100.00 kW
Pattern: Omni
Prop Model: Longley-Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast

60 dBµ F(50:50) Contour
Total Population: 101,943

Scale 1:1,250,000



Asher Broadcast Consulting LLC
justinasher@consultant.com
1 (202) 875-2986

V-Soft Communications LLC ©

Exhibit 3

Copy of Existing Antenna Structure Registration

(public record copy)

Registration Detail

Reg Number	1015413	Status	Constructed
File Number	A1179462	Constructed	08/27/1999
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type GTOWER - Guyed Structure Used for Communication Purposes

Location (in NAD83 Coordinates)

Lat/Long	41-04-38.0 N 094-19-10.0 W	Address	1551 Iris Ave.
City, State	CRESTON , IA		
Zip	50801	County	UNION
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
400.5	152.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
552.6	146.3

Painting and Lighting Specifications

FAA Chapters 4, 8, 12
 Paint and Light in Accordance with FAA Circular Number 70/7460-1L

FAA Notification

FAA Study	2016-ACE-1493-OE	FAA Issue Date	07/01/2016
-----------	------------------	----------------	------------

Owner & Contact Information

FRN	0004121950	Owner Entity Type	General Partnership
-----	------------	-------------------	---------------------

Owner

Cellco Partnership
 Attention To: Network Regulatory
 5055 North Point Pkwy
 NP2NE Network Engineering
 Alpharetta , GA 30022

P: (770)797-1070
 F:
 E: NetworkRegulatory@VerizonWireless.com

Contact

Attention To: Network Regulatory
 5055 North Point Pkwy
 NP2NE Network Engineering
 Alpharetta , GA 30022

P: (770)797-1070
 F:
 E: NetworkRegulatory@VerizonWireless.com

Last Action Status

Status	Constructed	Received	12/07/2020
Purpose	Admin Update	Entered	12/07/2020
Mode	Interactive		

Related Applications

12/07/2020	A1179462 - Admin Update (AU)
11/18/2020	A1178622 - Admin Update (AU)
11/04/2020	A1177439 - Admin Update (AU)
Related applications (11)	

Comments

Comments

None

History

Date

12/08/2020
 12/07/2020
 11/20/2020
 All History (17)

Event

Registration Printed
 Administrative Update Received
 Registration Printed

Pleadings

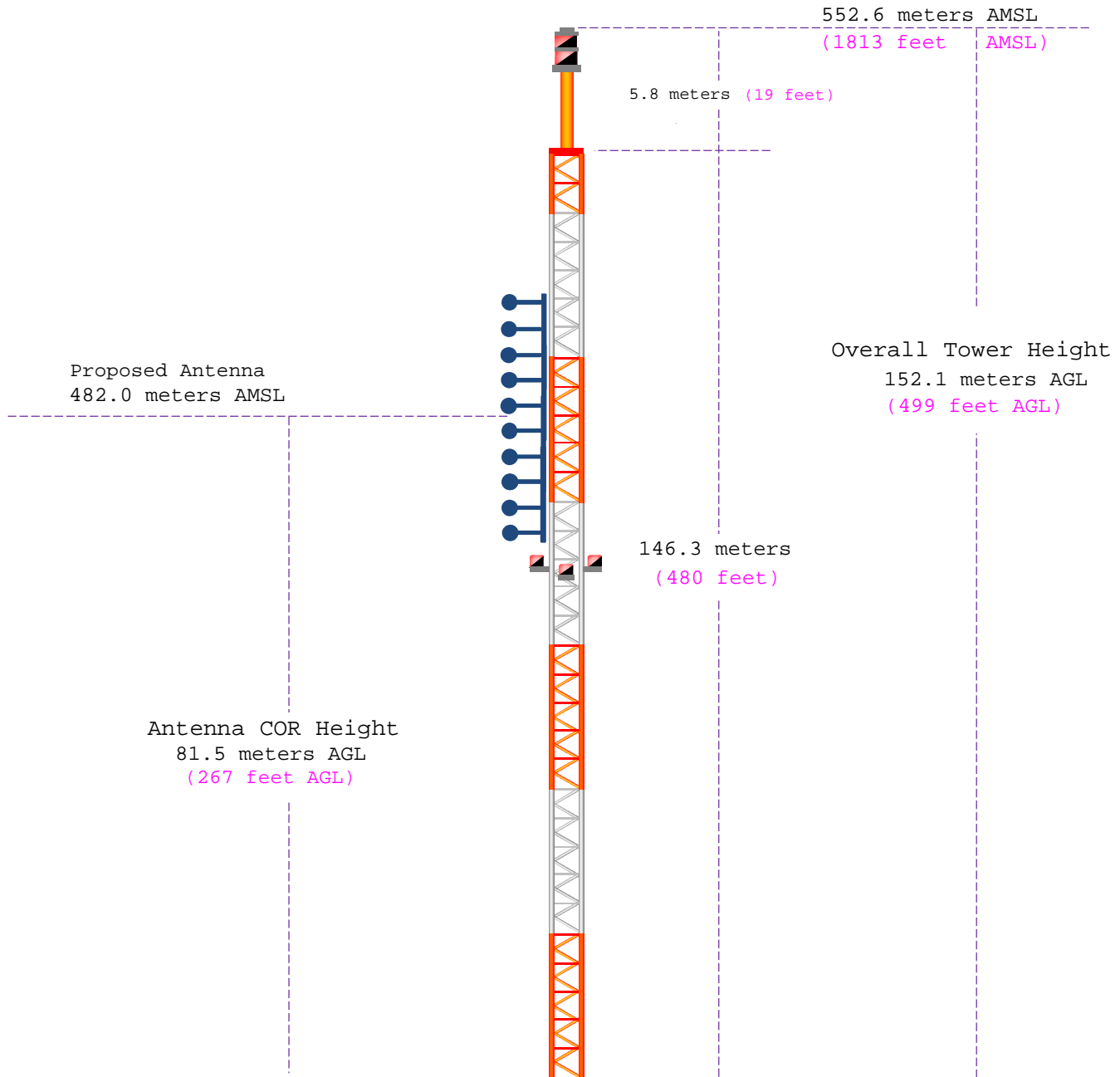
Pleading Type	Filer Name	Description	Date Entered
None			

Automated Letters

09/02/2003	Authorization, Reference 298919
01/23/2001	Authorization, Reference 97026

Exhibit 4

Vertical Plan of Antenna System and Support Tower



Ground Elevation: 400.5 meters AMSL (1314 feet AMSL)		
Address: 1551 Iris Ave.		
City: Creston	Latitude (D M S) Longitude (D M S)	
County: Union	----- (NAD 1927)	
State: Iowa	Lat/Long: 41-04-38.0 N 094-19-10.0 W (NAD 1983)	
Antenna Structure Registration 1015413	Drawing Is Not To Scale	Asher Broadcast Consulting, LLC justinasher@consultant.com 1(202)875-2986

Exhibit 5

HAAT and Miscellaneous Coordinate Information

HAAT Calculation (NAD 1983):

N. Lat. = 410438.0 W. Lng. = 941910.0
 HAAT and Distance to Contour,
 FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	377.5	104.5	100.0000	20.00	1.000	51.71
045	364.6	117.4	100.0000	20.00	1.000	53.85
090	360.9	121.1	100.0000	20.00	1.000	54.40
135	371.9	110.1	100.0000	20.00	1.000	52.67
180	386.3	95.7	100.0000	20.00	1.000	50.04
225	389.0	93.0	100.0000	20.00	1.000	49.51
270	402.6	79.4	100.0000	20.00	1.000	46.61
315	396.0	86.0	100.0000	20.00	1.000	48.05

Ave El= 381.11 M HAAT= 100.89 M AMSL= 482 M

NAD 1983 to NAD 1927 Conversion:

Various Coordinate Conversion Calculations (NAD 1983):

Position Type	Lat Lon
Degrees Lat Long	41.0772222°, -094.3194444°
Degrees Minutes	41°04.63333', -094°19.16667'
Degrees Minutes Seconds	41°04'38.0000", -094°19'10.0000"
UTM	15T 389160mE 4548168mN
UTM centimeter	15T 389160.95mE 4548168.18mN
MGRS	15TUF8916048168
Grid North	-0.9°
GARS	172LY39
Maidenhead	EN21UB18QM07
GEOREF	FJLM40830463
Plus Code	86H73MGJ+V6
Plus Code Extended	86H73MGJ+V6MXC75
what3words	crossed.hostels.chips

Exhibit 6

Tabulation of Proposed Allocation

Blue Text indicates contour protection studies toward select stations as included in **Exhibit(s) 7(a-c)**.

St. Gabriel Communications											
REFERENCE		CH#	215C1 - 90.9 MHz, Pwr= 100 kW, HAAT= 100.9 M, COR= 482 M							DISPLAY DATES	
41 04 38.00 N.			Average Protected F(50-50)= 51.04 km							DATA 01-02-24	
94 19 10.00 W.			Omni-directional							SEARCH 01-02-24	
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
215C1 KLOX Creston		CP _VN IA		0.0 0.0	0.00 0000125669	41 04 38.00 94 19 10.00	100.000 104		---Reference---		
215A KLOX Creston		LIC _VN IA		240.6 60.6	4.91 0000149549	41 03 20.00 94 22 13.80	0.500 35		---Reference---		
215C KUNI Cedar Falls		LIC _CN IA		55.2 236.8	246.37 BMLED19841106LW	42 18 58.90 91 51 31.60	100.000 524	192.8 799	88.4	0.1	9.0 Iowa Public Radio, Inc.
214C3 KNSC Carroll		LIC _CN IA		340.7 160.3	123.06 BLED20021121AAF	42 07 13.90 94 48 49.90	10.000 88	49.5 464	32.0	24.0	12.6 Iowa Public Radio, Inc.
213C1 KXCV Maryville		LIC _CN MO		212.7 32.4	89.00 BMLED20180420AAP	40 24 09.00 94 53 16.90	100.000 193	8.0 522	62.7	30.0	20.4 Northwest Missouri State U
214C2 KVNO Omaha		LIC _CN NE		280.8 99.7	145.09 0000114194	41 18 32.00 96 01 34.20	9.000 191	64.4 533	43.5	32.7	24.6 The Board Of Regents Of Th
269A KPUL« Winterset		LIC _CN IA		43.0 223.3	49.30 BLH20150428AAG	41 24 02.00 93 54 58.80	6.000 100	29.4 396	8.6	21.5R	27.8M Positive Impact Media, Inc
217C2 KDFR Des Moines		LIC DCN IA		47.6 228.1	89.28 0000217439	41 36 59.00 93 31 36.00	32.000 136	5.2 405	47.2	30.3	35.5 Family Stations, Inc.
215C1 KTBG Warrensburg		LIC DCN MO		175.6 355.8	236.24 BLED20131211AJM	38 57 29.80 94 06 43.50	100.000 167	143.1 435	54.9	45.4	32.4 Public Television 19, Inc.
216C3 KSJI St. Joseph		LIC _CN MO		195.1 14.8	154.54 BLED20111206AFB	39 44 03.00 94 47 24.90	14.000 132	60.0 411	40.0	44.4	34.8 University Of Northwestern
216C KNSK Fort Dodge		LIC _CN IA		357.8 177.7	193.63 BLED20070911ABL	42 49 02.90 94 24 41.90	100.000 326	106.4 676	73.3	35.4	39.3 Iowa Public Radio, Inc.
217C3 KCVA College Springs		CP DCN MO		229.5 49.0	89.17 0000167651	40 33 12.00 95 07 19.00	20.000 73	3.4 392	31.1	36.4	50.6 University Of Northwestern
214C2 KVSF Kirksville		LIC _CN MO		121.6 302.8	176.92 0000231072	40 13 46.20 92 32 39.40	50.000 147	78.9 421	53.0	43.2	39.9 University Of Northwestern
216A KICW Ottumwa		LIC _CN IA		93.9 275.1	163.99 BLED20190327AAP	40 57 41.10 92 22 13.70	1.700 137	35.3 368	23.5	74.3	56.7 Iowa Public Radio, Inc.
216C1 KUCV Lincoln		LIC DEN NE		254.0 72.4	215.29 BMLED20130228AMW	40 31 06.00 96 46 07.10	100.000 210	95.4 641	64.4	71.2	72.6 Nebraska Educational Telec

Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= - ZN2, Co to 3rd adjacent.
All separation margins (if shown) include rounding.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
***affixed to 'IN' or 'OUT' values = site inside restricted contour.
* = Station meets FCC minimum distance spacing for its class.

Exhibit 7a

Contour Protection Studies Toward Select Allocation Concern(s)

St. Gabriel Communications

FMCommander Single Allocation Study - 01-02-2024 - FCC NGDC 30 Sec
KLOX.P's Overlaps (In= 0.07 km, Out= 8.95 km)

KLOX.P CH 215 C1

Lat= 41 04 38.00, Lng= 94 19 10.00
100.0 kW 100.9 m HAAT, 482 m COR
Prot.= 60 dBu, Intef.= 40 dBu

KUNI CH 215 C BMLED19841106LW

Lat= 42 18 58.90, Lng= 91 51 31.60
100.0 kW 524 m HAAT, 799 m COR
Prot.= 60 dBu, Intef.= 40 dBu

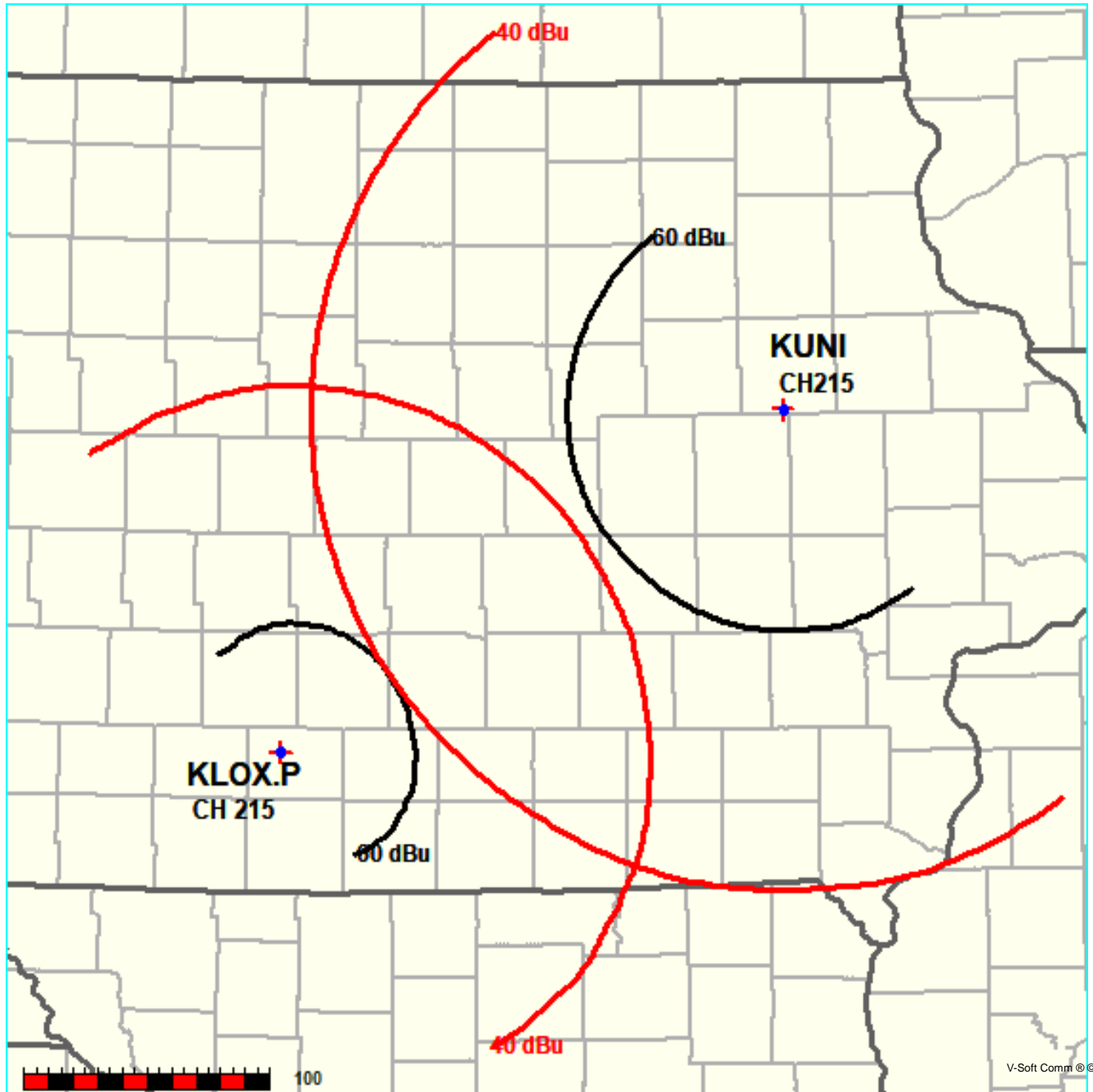


Exhibit 7a

Contour Protection Studies Toward Select Allocation Concern(s)

01-02-2024

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

KLOX.P

KUNI BMLED19841106LW

Channel = 215C1
Max ERP = 100 kW
RCAMSL = 482 m
N. Lat. 41 04 38.00
W. Lng. 94 19 10.00
Protected
60 dBu

Channel = 215C
Max ERP = 100 kW
RCAMSL = 799 m
N. Lat. 42 18 58.90
W. Lng. 91 51 31.60
Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
015.0	100.0000	0110.3	052.7	246.2	100.0000	0528.3	208.9	37.10	
016.0	100.0000	0111.4	052.9	246.1	100.0000	0528.3	208.1	37.24	
017.0	100.0000	0112.0	053.0	245.9	100.0000	0528.3	207.3	37.38	
018.0	100.0000	0112.1	053.0	245.7	100.0000	0528.3	206.6	37.50	
019.0	100.0000	0112.6	053.1	245.6	100.0000	0528.3	205.9	37.63	
020.0	100.0000	0113.2	053.2	245.4	100.0000	0528.3	205.2	37.76	
021.0	100.0000	0113.9	053.3	245.2	100.0000	0528.3	204.5	37.89	
022.0	100.0000	0114.4	053.4	245.1	100.0000	0528.3	203.8	38.01	
023.0	100.0000	0114.5	053.4	244.9	100.0000	0528.3	203.2	38.12	
024.0	100.0000	0113.6	053.3	244.6	100.0000	0528.3	202.7	38.21	
025.0	100.0000	0112.9	053.1	244.4	100.0000	0528.3	202.2	38.30	
026.0	100.0000	0113.0	053.2	244.2	100.0000	0528.4	201.6	38.40	
027.0	100.0000	0113.7	053.3	244.0	100.0000	0528.4	201.0	38.52	
028.0	100.0000	0114.4	053.4	243.8	100.0000	0528.4	200.4	38.63	
029.0	100.0000	0115.0	053.5	243.6	100.0000	0528.5	199.8	38.74	
030.0	100.0000	0115.1	053.5	243.4	100.0000	0528.6	199.3	38.83	
031.0	100.0000	0114.3	053.4	243.1	100.0000	0528.7	198.9	38.90	
032.0	100.0000	0113.4	053.2	242.9	100.0000	0528.9	198.6	38.96	
033.0	100.0000	0113.1	053.2	242.6	100.0000	0529.0	198.2	39.04	
034.0	100.0000	0113.4	053.2	242.4	100.0000	0529.2	197.7	39.12	
035.0	100.0000	0113.8	053.3	242.2	100.0000	0529.4	197.2	39.21	
036.0	100.0000	0114.3	053.4	241.9	100.0000	0529.5	196.8	39.29	
037.0	100.0000	0114.9	053.5	241.7	100.0000	0529.7	196.3	39.38	
038.0	100.0000	0115.5	053.6	241.5	100.0000	0529.8	195.8	39.46	
039.0	100.0000	0115.7	053.6	241.2	100.0000	0529.9	195.5	39.53	
040.0	100.0000	0115.4	053.5	240.9	100.0000	0530.0	195.2	39.58	
041.0	100.0000	0115.4	053.5	240.7	100.0000	0530.0	194.9	39.63	
042.0	100.0000	0115.8	053.6	240.4	100.0000	0530.1	194.6	39.70	
043.0	100.0000	0116.6	053.7	240.2	100.0000	0530.1	194.2	39.76	
044.0	100.0000	0117.2	053.8	239.9	100.0000	0530.1	193.9	39.82	
045.0	100.0000	0117.4	053.9	239.6	100.0000	0530.1	193.6	39.87	

Exhibit 7a
Contour Protection Studies Toward Select Allocation Concern(s)

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
046.0	100.0000	0117.1	053.8	239.4	100.0000	0530.0	193.5	39.90
047.0	100.0000	0116.7	053.7	239.1	100.0000	0529.9	193.3	39.92
048.0	100.0000	0116.7	053.7	238.8	100.0000	0529.7	193.2	39.94
049.0	100.0000	0116.9	053.8	238.5	100.0000	0529.6	193.0	39.97
050.0	100.0000	0116.8	053.8	238.3	100.0000	0529.4	192.9	39.99
051.0	100.0000	0116.2	053.7	238.0	100.0000	0529.2	192.9	39.99
052.0	100.0000	0115.5	053.6	237.7	100.0000	0529.0	192.9	39.98
053.0	100.0000	0115.2	053.5	237.4	100.0000	0528.8	192.9	39.98
054.0	100.0000	0115.2	053.5	237.2	100.0000	0528.5	192.9	39.98
055.0	100.0000	0115.1	053.5	236.9	100.0000	0528.2	192.9	39.97
056.0	100.0000	0114.7	053.4	236.6	100.0000	0527.9	192.9	39.96
057.0	100.0000	0114.4	053.4	236.3	100.0000	0527.6	193.0	39.94
058.0	100.0000	0114.0	053.3	236.1	100.0000	0527.2	193.1	39.92
059.0	100.0000	0113.7	053.3	235.8	100.0000	0526.8	193.3	39.89
060.0	100.0000	0113.4	053.2	235.5	100.0000	0526.4	193.4	39.86
061.0	100.0000	0113.5	053.2	235.2	100.0000	0526.0	193.5	39.84
062.0	100.0000	0114.0	053.3	235.0	100.0000	0525.6	193.5	39.82
063.0	100.0000	0114.5	053.4	234.7	100.0000	0525.2	193.6	39.81
064.0	100.0000	0114.8	053.4	234.4	100.0000	0524.8	193.7	39.78
065.0	100.0000	0114.7	053.4	234.1	100.0000	0524.5	193.9	39.74
066.0	100.0000	0114.7	053.4	233.9	100.0000	0524.1	194.1	39.69
067.0	100.0000	0115.0	053.5	233.6	100.0000	0523.8	194.3	39.66
068.0	100.0000	0115.9	053.6	233.3	100.0000	0523.5	194.4	39.63
069.0	100.0000	0116.9	053.8	233.0	100.0000	0523.2	194.6	39.60
070.0	100.0000	0117.4	053.9	232.8	100.0000	0523.0	194.8	39.56
071.0	100.0000	0117.5	053.9	232.5	100.0000	0522.7	195.1	39.51
072.0	100.0000	0117.0	053.8	232.3	100.0000	0522.5	195.5	39.43
073.0	100.0000	0116.4	053.7	232.0	100.0000	0522.4	195.9	39.35
074.0	100.0000	0115.6	053.6	231.8	100.0000	0522.2	196.4	39.26
075.0	100.0000	0114.8	053.4	231.5	100.0000	0522.0	196.9	39.17
076.0	100.0000	0114.3	053.4	231.3	100.0000	0521.8	197.4	39.08
077.0	100.0000	0113.9	053.3	231.1	100.0000	0521.6	197.9	38.99
078.0	100.0000	0114.3	053.4	230.8	100.0000	0521.4	198.3	38.92
079.0	100.0000	0114.7	053.4	230.6	100.0000	0521.3	198.7	38.84
080.0	100.0000	0115.2	053.5	230.3	100.0000	0521.1	199.1	38.77
081.0	100.0000	0115.3	053.5	230.1	100.0000	0520.9	199.6	38.68
082.0	100.0000	0115.3	053.5	229.9	100.0000	0520.7	200.1	38.59
083.0	100.0000	0115.4	053.5	229.7	100.0000	0520.5	200.6	38.49
084.0	100.0000	0115.9	053.6	229.4	100.0000	0520.3	201.1	38.40
085.0	100.0000	0117.1	053.8	229.2	100.0000	0520.1	201.5	38.33
086.0	100.0000	0117.9	053.9	229.0	100.0000	0520.0	201.9	38.24
087.0	100.0000	0118.6	054.0	228.7	100.0000	0519.8	202.5	38.14

Exhibit 7a

Contour Protection Studies Toward Select Allocation Concern(s)

01-02-2024

Terrain Data: FCC NGDC 30 Sec

FMOVer Analysis

KUNI BMLD19841106LW

KLOX.P

Channel = 215C

Max ERP = 100 kW

RCAMSL = 799 m

N. Lat. 42 18 58.90

W. Lng. 91 51 31.60

Protected

60 dBu

Channel = 215C1

Max ERP = 100 kW

RCAMSL = 482 m

N. Lat. 41 04 38.00

W. Lng. 94 19 10.00

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
192.0	100.0000	0538.5	089.0	074.1	100.0000	0115.5	193.7	32.11	
193.0	100.0000	0538.2	089.0	073.9	100.0000	0115.7	192.3	32.37	
194.0	100.0000	0538.7	089.0	073.7	100.0000	0115.9	190.9	32.62	
195.0	100.0000	0539.0	089.0	073.4	100.0000	0116.1	189.6	32.87	
196.0	100.0000	0538.4	089.0	073.2	100.0000	0116.2	188.2	33.11	
197.0	100.0000	0536.8	088.9	072.9	100.0000	0116.4	187.0	33.35	
198.0	100.0000	0535.3	088.8	072.6	100.0000	0116.6	185.7	33.58	
199.0	100.0000	0534.3	088.8	072.4	100.0000	0116.8	184.5	33.81	
200.0	100.0000	0533.6	088.7	072.1	100.0000	0117.0	183.2	34.04	
201.0	100.0000	0532.3	088.7	071.8	100.0000	0117.2	182.0	34.26	
202.0	100.0000	0530.8	088.6	071.4	100.0000	0117.4	180.9	34.47	
203.0	100.0000	0529.6	088.5	071.1	100.0000	0117.5	179.7	34.68	
204.0	100.0000	0528.8	088.4	070.8	100.0000	0117.5	178.6	34.89	
205.0	100.0000	0527.9	088.4	070.4	100.0000	0117.5	177.5	35.09	
206.0	100.0000	0526.7	088.3	070.1	100.0000	0117.4	176.4	35.28	
207.0	100.0000	0525.0	088.2	069.7	100.0000	0117.3	175.4	35.46	
208.0	100.0000	0523.3	088.1	069.3	100.0000	0117.1	174.4	35.63	
209.0	100.0000	0521.9	088.0	068.9	100.0000	0116.8	173.5	35.79	
210.0	100.0000	0520.8	088.0	068.5	100.0000	0116.4	172.5	35.95	
211.0	100.0000	0519.8	087.9	068.1	100.0000	0116.0	171.6	36.11	
212.0	100.0000	0519.1	087.9	067.7	100.0000	0115.6	170.7	36.26	
213.0	100.0000	0519.1	087.9	067.3	100.0000	0115.2	169.7	36.41	
214.0	100.0000	0519.5	087.9	066.8	100.0000	0114.9	168.8	36.57	
215.0	100.0000	0519.8	087.9	066.4	100.0000	0114.8	168.0	36.72	
216.0	100.0000	0519.8	087.9	066.0	100.0000	0114.7	167.2	36.87	
217.0	100.0000	0519.7	087.9	065.5	100.0000	0114.6	166.4	37.01	
218.0	100.0000	0519.5	087.9	065.0	100.0000	0114.7	165.6	37.14	
219.0	100.0000	0519.3	087.9	064.6	100.0000	0114.7	164.9	37.27	
220.0	100.0000	0519.0	087.9	064.1	100.0000	0114.8	164.3	37.39	
221.0	100.0000	0518.8	087.8	063.6	100.0000	0114.7	163.6	37.51	
222.0	100.0000	0518.6	087.8	063.1	100.0000	0114.5	163.0	37.61	
223.0	100.0000	0518.5	087.8	062.6	100.0000	0114.3	162.4	37.70	
224.0	100.0000	0518.5	087.8	062.1	100.0000	0114.1	161.9	37.79	

Exhibit 7a
Contour Protection Studies Toward Select Allocation Concern(s)

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
225.0	100.0000	0518.6	087.8	061.6	100.0000	0113.8	161.4	37.87
226.0	100.0000	0518.8	087.8	061.1	100.0000	0113.5	160.9	37.95
227.0	100.0000	0519.1	087.9	060.6	100.0000	0113.4	160.5	38.03
228.0	100.0000	0519.4	087.9	060.0	100.0000	0113.4	160.1	38.10
229.0	100.0000	0520.0	087.9	059.5	100.0000	0113.6	159.7	38.17
230.0	100.0000	0520.8	088.0	059.0	100.0000	0113.7	159.4	38.24
231.0	100.0000	0521.6	088.0	058.4	100.0000	0113.9	159.1	38.29
232.0	100.0000	0522.4	088.1	057.9	100.0000	0114.0	158.8	38.34
233.0	100.0000	0523.2	088.1	057.3	100.0000	0114.2	158.6	38.39
234.0	100.0000	0524.3	088.2	056.8	100.0000	0114.4	158.4	38.43
235.0	100.0000	0525.7	088.3	056.2	100.0000	0114.6	158.2	38.47
236.0	100.0000	0527.1	088.3	055.7	100.0000	0114.9	158.0	38.50
237.0	100.0000	0528.3	088.4	055.1	100.0000	0115.1	158.0	38.52
238.0	100.0000	0529.3	088.5	054.5	100.0000	0115.2	157.9	38.53
239.0	100.0000	0529.8	088.5	054.0	100.0000	0115.2	158.0	38.52
240.0	100.0000	0530.1	088.5	053.4	100.0000	0115.2	158.1	38.50
241.0	100.0000	0530.0	088.5	052.9	100.0000	0115.2	158.2	38.48
242.0	100.0000	0529.5	088.5	052.3	100.0000	0115.3	158.5	38.44
243.0	100.0000	0528.8	088.4	051.8	100.0000	0115.6	158.7	38.41
244.0	100.0000	0528.4	088.4	051.2	100.0000	0116.0	159.0	38.36
245.0	100.0000	0528.3	088.4	050.7	100.0000	0116.4	159.4	38.32
246.0	100.0000	0528.3	088.4	050.1	100.0000	0116.7	159.7	38.27
247.0	100.0000	0528.1	088.4	049.6	100.0000	0116.9	160.1	38.20
248.0	100.0000	0527.5	088.4	049.1	100.0000	0116.9	160.6	38.12
249.0	100.0000	0526.9	088.3	048.6	100.0000	0116.9	161.1	38.02
250.0	100.0000	0526.6	088.3	048.0	100.0000	0116.7	161.6	37.92
251.0	100.0000	0526.6	088.3	047.5	100.0000	0116.6	162.2	37.82
252.0	100.0000	0526.7	088.3	047.0	100.0000	0116.7	162.8	37.71
253.0	100.0000	0527.0	088.3	046.5	100.0000	0116.9	163.4	37.61
254.0	100.0000	0527.3	088.4	046.0	100.0000	0117.0	164.0	37.50
255.0	100.0000	0527.6	088.4	045.6	100.0000	0117.2	164.7	37.38
256.0	100.0000	0528.0	088.4	045.1	100.0000	0117.4	165.4	37.25
257.0	100.0000	0528.3	088.4	044.6	100.0000	0117.4	166.2	37.12
258.0	100.0000	0528.7	088.4	044.2	100.0000	0117.3	167.0	36.97
259.0	100.0000	0529.2	088.5	043.7	100.0000	0117.1	167.8	36.82
260.0	100.0000	0529.2	088.5	043.3	100.0000	0116.8	168.7	36.66
261.0	100.0000	0528.5	088.4	042.9	100.0000	0116.5	169.6	36.48
262.0	100.0000	0527.8	088.4	042.5	100.0000	0116.1	170.6	36.29
263.0	100.0000	0527.0	088.3	042.1	100.0000	0115.9	171.6	36.10
264.0	100.0000	0526.6	088.3	041.7	100.0000	0115.6	172.6	35.91
265.0	100.0000	0526.3	088.3	041.3	100.0000	0115.4	173.6	35.72
266.0	100.0000	0525.9	088.3	040.9	100.0000	0115.4	174.7	35.53
267.0	100.0000	0525.3	088.2	040.6	100.0000	0115.3	175.8	35.33
268.0	100.0000	0524.8	088.2	040.2	100.0000	0115.4	176.9	35.13

Exhibit 7b
Contour Protection Studies Toward Select Allocation Concern(s)

St. Gabriel Communications

FMCommander Single Allocation Study - 01-02-2024 - FCC NGDC 30 Sec
KLOX.P's Overlaps (In= 24.05 km, Out= 12.56 km)

KLOX.P CH 215 C1
Lat= 41 04 38.00, Lng= 94 19 10.00
100.0 kW 100.9 m HAAT, 482 m COR
Prot.= 60 dBu, Intef.= 54 dBu

KNSC CH 214 C3 BLED20021121AAF
Lat= 42 07 13.90, Lng= 94 48 49.90
10.0 kW 88 m HAAT, 464 m COR
Prot.= 60 dBu, Intef.= 54 dBu

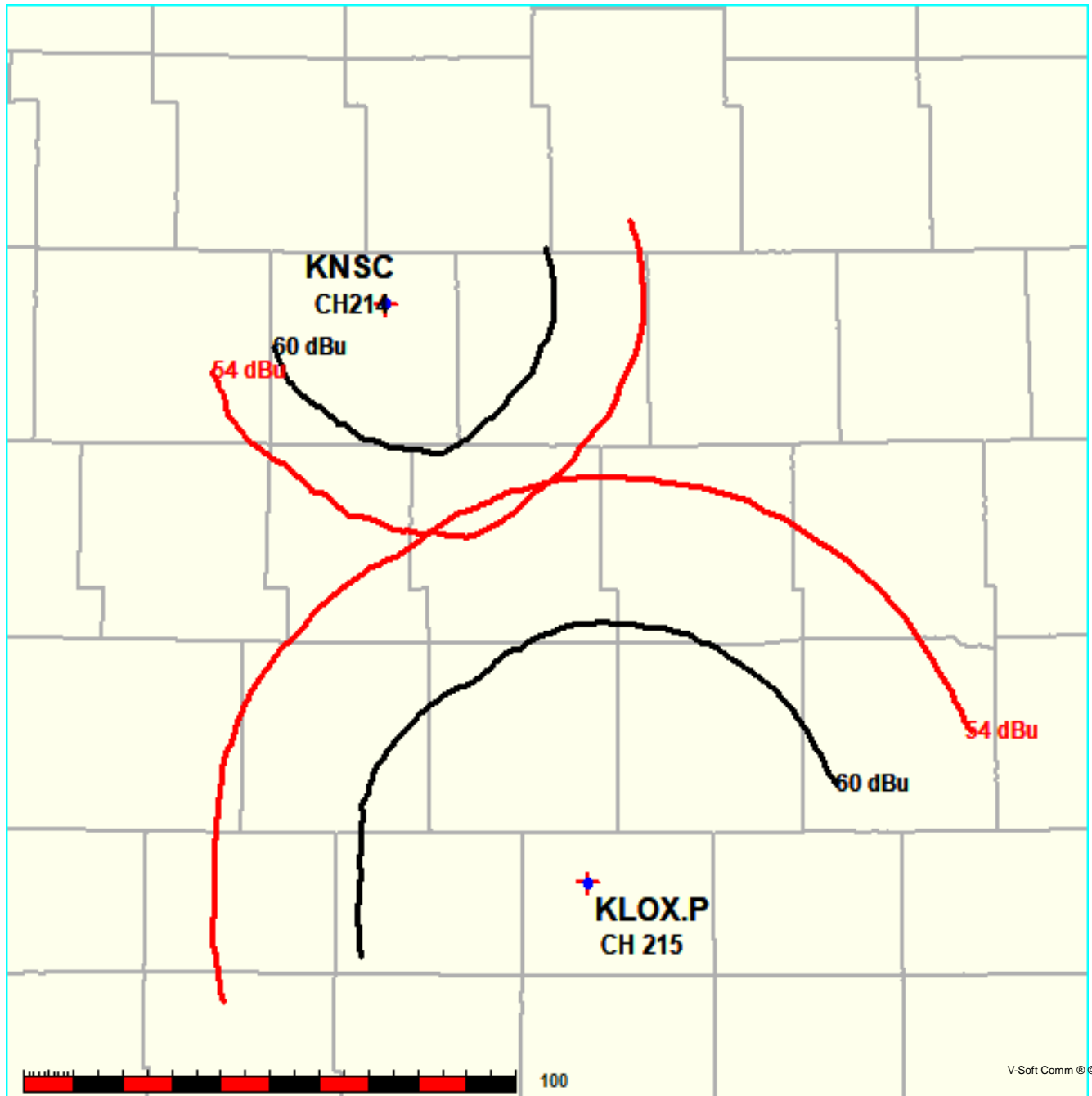


Exhibit 7b

Contour Protection Studies Toward Select Allocation Concern(s)

01-02-2024 Terrain Data: FCC NGDC 30 Sec FMOver Analysis

KLOX.P

KNSC BLED20021121AAF

Channel = 215C1
 Max ERP = 100 kW
 RCAMSL = 482 m
 N. Lat. 41 04 38.00
 W. Lng. 94 19 10.00
 Protected
 60 dBu

Channel = 214C3
 Max ERP = 10 kW
 RCAMSL = 464 m
 N. Lat. 42 07 13.90
 W. Lng. 94 48 49.90
 Interfering
 54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
302.0	100.0000	0088.7	048.6	180.0	010.0000	0080.1	090.4	40.32	
303.0	100.0000	0088.6	048.6	179.7	010.0000	0080.6	089.6	40.52	
304.0	100.0000	0088.5	048.6	179.4	010.0000	0081.1	088.9	40.73	
305.0	100.0000	0088.4	048.6	179.0	010.0000	0081.6	088.3	40.93	
306.0	100.0000	0088.3	048.5	178.7	010.0000	0082.1	087.6	41.13	
307.0	100.0000	0087.8	048.4	178.3	010.0000	0082.8	087.0	41.32	
308.0	100.0000	0086.9	048.2	177.8	010.0000	0083.2	086.5	41.48	
309.0	100.0000	0085.9	048.0	177.4	010.0000	0083.3	086.0	41.62	
310.0	100.0000	0085.1	047.9	176.9	010.0000	0083.4	085.4	41.76	
311.0	100.0000	0085.0	047.8	176.5	010.0000	0083.6	084.9	41.93	
312.0	100.0000	0085.3	047.9	176.1	010.0000	0083.7	084.2	42.11	
313.0	100.0000	0085.9	048.0	175.8	010.0000	0083.7	083.5	42.29	
314.0	100.0000	0086.2	048.1	175.4	010.0000	0083.7	082.9	42.45	
315.0	100.0000	0086.0	048.0	174.9	010.0000	0083.9	082.4	42.60	
316.0	100.0000	0085.6	048.0	174.5	010.0000	0084.0	081.9	42.73	
317.0	100.0000	0085.1	047.9	173.9	010.0000	0084.4	081.5	42.87	
318.0	100.0000	0084.6	047.7	173.4	010.0000	0084.8	081.1	43.00	
319.0	100.0000	0084.0	047.6	172.9	010.0000	0085.4	080.7	43.13	
320.0	100.0000	0083.7	047.5	172.4	010.0000	0086.1	080.3	43.28	
321.0	100.0000	0083.4	047.5	171.8	010.0000	0086.7	079.9	43.41	
322.0	100.0000	0083.2	047.4	171.3	010.0000	0087.2	079.6	43.54	
323.0	100.0000	0083.0	047.4	170.8	010.0000	0087.7	079.2	43.66	
324.0	100.0000	0082.7	047.3	170.2	010.0000	0087.8	078.9	43.76	
325.0	100.0000	0082.2	047.2	169.7	010.0000	0087.7	078.6	43.83	
326.0	100.0000	0081.5	047.1	169.1	010.0000	0087.8	078.4	43.88	
327.0	100.0000	0080.5	046.9	168.4	010.0000	0087.9	078.3	43.92	
328.0	100.0000	0079.5	046.6	167.8	010.0000	0088.4	078.2	43.97	
329.0	100.0000	0078.8	046.5	167.2	010.0000	0089.4	078.1	44.06	
330.0	100.0000	0078.6	046.4	166.6	010.0000	0090.5	077.9	44.17	
331.0	100.0000	0079.1	046.5	166.1	010.0000	0091.6	077.6	44.32	

Exhibit 7b
Contour Protection Studies Toward Select Allocation Concern(s)

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
332.0	100.0000	0079.7	046.7	165.5	010.0000	0092.7	077.2	44.47
333.0	100.0000	0080.3	046.8	165.0	010.0000	0093.7	076.9	44.61
334.0	100.0000	0081.1	047.0	164.4	010.0000	0094.5	076.6	44.75
335.0	100.0000	0082.4	047.3	163.8	010.0000	0095.3	076.2	44.91
336.0	100.0000	0083.9	047.6	163.2	010.0000	0096.1	075.7	45.08
337.0	100.0000	0085.3	047.9	162.6	010.0000	0097.2	075.3	45.25
338.0	100.0000	0086.8	048.2	162.0	010.0000	0098.4	074.9	45.42
339.0	100.0000	0088.1	048.5	161.4	010.0000	0099.7	074.6	45.59
340.0	100.0000	0089.2	048.7	160.7	010.0000	0100.7	074.3	45.72
341.0	100.0000	0089.8	048.9	160.1	010.0000	0101.4	074.2	45.79
342.0	100.0000	0089.7	048.8	159.4	010.0000	0101.7	074.2	45.79
343.0	100.0000	0089.7	048.8	158.8	010.0000	0101.6	074.3	45.77
344.0	100.0000	0090.6	049.0	158.1	010.0000	0101.3	074.2	45.79
345.0	100.0000	0092.0	049.3	157.4	010.0000	0100.9	074.0	45.83
346.0	100.0000	0093.3	049.6	156.7	010.0000	0100.6	073.9	45.85
347.0	100.0000	0094.9	049.9	156.0	010.0000	0100.3	073.7	45.88
348.0	100.0000	0096.4	050.2	155.3	010.0000	0100.1	073.6	45.90
349.0	100.0000	0097.3	050.4	154.6	010.0000	0099.9	073.6	45.89
350.0	100.0000	0097.5	050.4	154.0	010.0000	0100.0	073.8	45.84
351.0	100.0000	0097.4	050.4	153.3	010.0000	0100.0	074.1	45.76
352.0	100.0000	0098.1	050.5	152.6	010.0000	0100.1	074.2	45.72
353.0	100.0000	0099.6	050.8	151.9	010.0000	0100.0	074.2	45.71
354.0	100.0000	0101.7	051.2	151.2	010.0000	0099.9	074.2	45.71
355.0	100.0000	0103.3	051.5	150.4	010.0000	0099.7	074.3	45.68
356.0	100.0000	0103.7	051.6	149.8	010.0000	0099.5	074.6	45.58
357.0	100.0000	0103.9	051.6	149.1	010.0000	0099.4	075.0	45.47
358.0	100.0000	0103.6	051.5	148.6	010.0000	0099.2	075.4	45.32
359.0	100.0000	0104.1	051.6	147.9	010.0000	0098.9	075.8	45.19
000.0	100.0000	0104.5	051.7	147.3	010.0000	0098.4	076.2	45.06
001.0	100.0000	0105.1	051.8	146.7	010.0000	0097.9	076.6	44.92
002.0	100.0000	0106.0	052.0	146.1	010.0000	0097.4	077.0	44.78
003.0	100.0000	0106.6	052.1	145.5	010.0000	0096.8	077.5	44.62
004.0	100.0000	0106.5	052.1	145.0	010.0000	0096.4	078.0	44.44
005.0	100.0000	0105.9	051.9	144.5	010.0000	0096.1	078.7	44.24
006.0	100.0000	0105.6	051.9	144.1	010.0000	0095.8	079.3	44.05
007.0	100.0000	0106.2	052.0	143.5	010.0000	0095.5	079.9	43.88
008.0	100.0000	0107.1	052.2	143.0	010.0000	0095.3	080.4	43.73
009.0	100.0000	0107.6	052.2	142.5	010.0000	0095.2	081.0	43.56
010.0	100.0000	0107.6	052.3	142.0	010.0000	0095.2	081.6	43.38
011.0	100.0000	0107.5	052.2	141.6	010.0000	0095.2	082.3	43.19
012.0	100.0000	0107.6	052.2	141.2	010.0000	0095.3	083.0	43.00
013.0	100.0000	0108.0	052.3	140.8	010.0000	0095.3	083.7	42.82
014.0	100.0000	0109.0	052.5	140.3	010.0000	0095.3	084.3	42.65

Exhibit 7b

Contour Protection Studies Toward Select Allocation Concern(s)

01-02-2024 Terrain Data: FCC NGDC 30 Sec FMOver Analysis

KNSC BLED20021121AAF

KLOX.P

Channel = 214C3
 Max ERP = 10 kW
 RCAMSL = 464 m
 N. Lat. 42 07 13.90
 W. Lng. 94 48 49.90
 Protected
 60 dBu

Channel = 215C1
 Max ERP = 100 kW
 RCAMSL = 482 m
 N. Lat. 41 04 38.00
 W. Lng. 94 19 10.00
 Interfering
 54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
115.0	010.0000	0104.0	032.5	353.6	100.0000	0100.9	102.8	48.20	
116.0	010.0000	0103.8	032.4	353.4	100.0000	0100.6	102.4	48.28	
117.0	010.0000	0103.4	032.4	353.2	100.0000	0100.1	102.0	48.37	
118.0	010.0000	0102.6	032.3	353.0	100.0000	0099.7	101.6	48.44	
119.0	010.0000	0101.6	032.1	352.7	100.0000	0099.2	101.2	48.50	
120.0	010.0000	0100.5	031.9	352.5	100.0000	0098.7	100.9	48.56	
121.0	010.0000	0099.5	031.8	352.2	100.0000	0098.4	100.5	48.62	
122.0	010.0000	0098.7	031.6	351.9	100.0000	0098.0	100.2	48.68	
123.0	010.0000	0098.1	031.5	351.7	100.0000	0097.7	099.8	48.75	
124.0	010.0000	0097.4	031.4	351.4	100.0000	0097.6	099.5	48.82	
125.0	010.0000	0096.7	031.3	351.2	100.0000	0097.5	099.2	48.89	
126.0	010.0000	0096.1	031.2	350.9	100.0000	0097.4	098.9	48.97	
127.0	010.0000	0095.9	031.2	350.7	100.0000	0097.4	098.5	49.05	
128.0	010.0000	0096.3	031.3	350.5	100.0000	0097.5	098.1	49.15	
129.0	010.0000	0097.1	031.4	350.3	100.0000	0097.5	097.6	49.26	
130.0	010.0000	0098.0	031.5	350.1	100.0000	0097.5	097.2	49.37	
131.0	010.0000	0098.6	031.6	349.9	100.0000	0097.5	096.7	49.47	
132.0	010.0000	0098.6	031.6	349.6	100.0000	0097.5	096.4	49.55	
133.0	010.0000	0098.1	031.5	349.3	100.0000	0097.4	096.1	49.61	
134.0	010.0000	0097.3	031.4	349.0	100.0000	0097.3	095.9	49.66	
135.0	010.0000	0096.7	031.3	348.7	100.0000	0097.1	095.7	49.71	
136.0	010.0000	0096.4	031.3	348.4	100.0000	0096.8	095.4	49.76	
137.0	010.0000	0096.2	031.2	348.1	100.0000	0096.5	095.2	49.81	
138.0	010.0000	0095.8	031.2	347.8	100.0000	0096.2	095.0	49.85	
139.0	010.0000	0095.5	031.1	347.5	100.0000	0095.7	094.7	49.89	
140.0	010.0000	0095.4	031.1	347.2	100.0000	0095.2	094.5	49.92	
141.0	010.0000	0095.3	031.1	346.9	100.0000	0094.7	094.3	49.96	
142.0	010.0000	0095.2	031.1	346.6	100.0000	0094.2	094.1	49.99	
143.0	010.0000	0095.3	031.1	346.3	100.0000	0093.7	093.8	50.03	
144.0	010.0000	0095.7	031.2	346.0	100.0000	0093.3	093.6	50.08	
145.0	010.0000	0096.4	031.3	345.7	100.0000	0093.0	093.3	50.14	
146.0	010.0000	0097.3	031.4	345.4	100.0000	0092.6	093.0	50.21	
147.0	010.0000	0098.2	031.6	345.2	100.0000	0092.3	092.6	50.27	

Exhibit 7b
Contour Protection Studies Toward Select Allocation Concern(s)

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
148.0	010.0000	0098.9	031.7	344.8	100.0000	0091.8	092.4	50.32
149.0	010.0000	0099.3	031.7	344.5	100.0000	0091.4	092.1	50.36
150.0	010.0000	0099.6	031.8	344.2	100.0000	0090.9	092.0	50.39
151.0	010.0000	0099.8	031.8	343.9	100.0000	0090.5	091.8	50.41
152.0	010.0000	0100.0	031.9	343.5	100.0000	0090.1	091.7	50.43
153.0	010.0000	0100.1	031.9	343.2	100.0000	0089.8	091.6	50.44
154.0	010.0000	0100.0	031.8	342.8	100.0000	0089.6	091.5	50.46
155.0	010.0000	0100.0	031.9	342.5	100.0000	0089.6	091.4	50.48
156.0	010.0000	0100.3	031.9	342.2	100.0000	0089.7	091.3	50.51
157.0	010.0000	0100.7	032.0	341.8	100.0000	0089.8	091.2	50.54
158.0	010.0000	0101.2	032.0	341.5	100.0000	0089.9	091.0	50.58
159.0	010.0000	0101.6	032.1	341.1	100.0000	0089.9	091.0	50.60
160.0	010.0000	0101.5	032.1	340.8	100.0000	0089.8	091.0	50.59
161.0	010.0000	0100.4	031.9	340.4	100.0000	0089.6	091.2	50.54
162.0	010.0000	0098.5	031.6	340.1	100.0000	0089.3	091.5	50.44
163.0	010.0000	0096.6	031.3	339.7	100.0000	0089.0	091.8	50.34
164.0	010.0000	0095.0	031.0	339.4	100.0000	0088.6	092.1	50.25
165.0	010.0000	0093.7	030.8	339.1	100.0000	0088.2	092.4	50.16
166.0	010.0000	0091.8	030.5	338.8	100.0000	0087.9	092.7	50.05
167.0	010.0000	0089.8	030.2	338.5	100.0000	0087.5	093.1	49.94
168.0	010.0000	0088.2	029.9	338.2	100.0000	0087.1	093.5	49.83
169.0	010.0000	0087.8	029.9	337.9	100.0000	0086.6	093.7	49.77
170.0	010.0000	0087.7	029.9	337.6	100.0000	0086.1	093.8	49.72
171.0	010.0000	0087.5	029.8	337.3	100.0000	0085.7	093.9	49.66
172.0	010.0000	0086.6	029.7	337.0	100.0000	0085.3	094.2	49.58
173.0	010.0000	0085.3	029.4	336.7	100.0000	0084.9	094.6	49.48
174.0	010.0000	0084.3	029.3	336.5	100.0000	0084.5	094.9	49.39
175.0	010.0000	0083.8	029.2	336.2	100.0000	0084.1	095.1	49.31
176.0	010.0000	0083.7	029.2	335.9	100.0000	0083.7	095.3	49.25
177.0	010.0000	0083.4	029.1	335.6	100.0000	0083.3	095.5	49.18
178.0	010.0000	0083.1	029.1	335.4	100.0000	0082.9	095.8	49.10
179.0	010.0000	0081.6	028.8	335.1	100.0000	0082.6	096.2	48.99
180.0	010.0000	0080.1	028.6	334.9	100.0000	0082.3	096.6	48.87
181.0	010.0000	0078.5	028.3	334.7	100.0000	0082.0	097.1	48.76
182.0	010.0000	0077.1	028.1	334.5	100.0000	0081.8	097.5	48.65
183.0	010.0000	0075.8	027.9	334.4	100.0000	0081.5	097.9	48.55
184.0	010.0000	0075.0	027.7	334.1	100.0000	0081.3	098.3	48.45
185.0	010.0000	0074.6	027.7	333.9	100.0000	0081.1	098.6	48.38
186.0	010.0000	0073.9	027.6	333.7	100.0000	0080.9	099.0	48.29
187.0	010.0000	0073.5	027.5	333.5	100.0000	0080.7	099.3	48.21
188.0	010.0000	0073.8	027.5	333.3	100.0000	0080.5	099.5	48.16
189.0	010.0000	0074.2	027.6	333.0	100.0000	0080.3	099.7	48.10
190.0	010.0000	0074.2	027.6	332.8	100.0000	0080.2	100.0	48.03
191.0	010.0000	0073.3	027.4	332.6	100.0000	0080.1	100.4	47.94

Exhibit 7c
Contour Protection Studies Toward Select Allocation Concern(s)

St. Gabriel Communications

FMCommander Single Allocation Study - 01-02-2024 - FCC NGDC 30 Sec
KLOX.P's Overlaps (In= 29.99 km, Out= 20.44 km)

KLOX.P CH 215 C1
Lat= 41 04 38.00, Lng= 94 19 10.00
100.0 kW 100.9 m HAAT, 482 m COR
Prot.= 60 dBu, Intef.= 100 dBu

KXCV CH 213 C1 BMLED20180420AAP
Lat= 40 24 09.00, Lng= 94 53 16.90
100.0 kW 193.1 m HAAT, 521.5 m COR
Prot.= 60 dBu, Intef.= 100 dBu

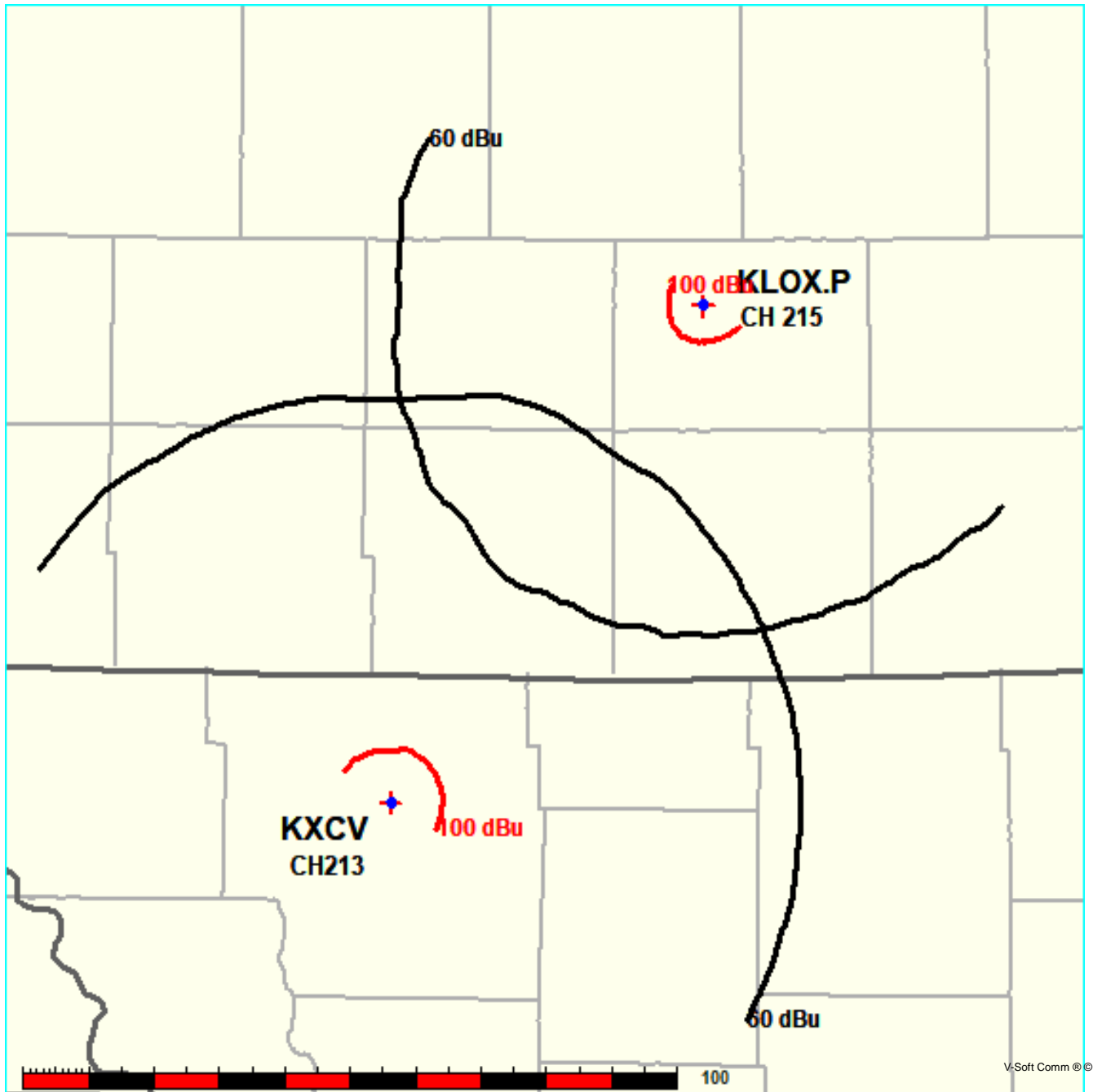


Exhibit 7c

Contour Protection Studies Toward Select Allocation Concern(s)

01-02-2024 Terrain Data: FCC NGDC 30 Sec FMOver Analysis

KLOX.P

KXCV BMLED20180420AAP

Channel = 215C1
 Max ERP = 100 kW
 RCAMSL = 482 m
 N. Lat. 41 04 38.00
 W. Lng. 94 19 10.00
 Protected
 60 dBu

Channel = 213C1
 Max ERP = 100 kW
 RCAMSL = 521.5 m
 N. Lat. 40 24 09.00
 W. Lng. 94 53 16.90
 Interfering
 100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
173.0	100.0000	0094.6	049.8	064.5	100.0000	0187.6	059.9	64.79	
174.0	100.0000	0094.1	049.7	064.2	100.0000	0187.8	059.1	65.09	
175.0	100.0000	0094.2	049.7	063.9	100.0000	0187.9	058.3	65.40	
176.0	100.0000	0094.7	049.8	063.7	100.0000	0188.0	057.4	65.72	
177.0	100.0000	0095.2	049.9	063.4	100.0000	0188.1	056.6	66.04	
178.0	100.0000	0095.9	050.1	063.2	100.0000	0188.1	055.7	66.37	
179.0	100.0000	0096.2	050.1	062.9	100.0000	0188.2	054.9	66.68	
180.0	100.0000	0095.7	050.0	062.4	100.0000	0188.3	054.2	66.97	
181.0	100.0000	0095.1	049.9	061.8	100.0000	0188.3	053.4	67.25	
182.0	100.0000	0094.5	049.8	061.2	100.0000	0188.3	052.7	67.51	
183.0	100.0000	0094.7	049.8	060.8	100.0000	0188.1	052.0	67.80	
184.0	100.0000	0095.7	050.0	060.4	100.0000	0188.0	051.1	68.13	
185.0	100.0000	0096.5	050.2	060.0	100.0000	0188.0	050.3	68.44	
186.0	100.0000	0097.0	050.3	059.6	100.0000	0188.0	049.6	68.74	
187.0	100.0000	0097.0	050.3	058.9	100.0000	0188.2	048.9	69.03	
188.0	100.0000	0095.7	050.0	058.1	100.0000	0189.0	048.3	69.27	
189.0	100.0000	0094.2	049.7	057.1	100.0000	0190.1	047.9	69.50	
190.0	100.0000	0093.1	049.5	056.2	100.0000	0191.0	047.4	69.74	
191.0	100.0000	0092.9	049.5	055.4	100.0000	0191.3	046.8	69.99	
192.0	100.0000	0093.8	049.7	054.8	100.0000	0191.5	046.1	70.29	
193.0	100.0000	0094.8	049.9	054.2	100.0000	0191.5	045.3	70.60	
194.0	100.0000	0095.8	050.1	053.5	100.0000	0191.5	044.6	70.90	
195.0	100.0000	0096.5	050.2	052.7	100.0000	0191.6	043.9	71.19	
196.0	100.0000	0096.5	050.2	051.8	100.0000	0191.5	043.4	71.42	
197.0	100.0000	0096.3	050.2	050.9	100.0000	0191.2	042.9	71.61	
198.0	100.0000	0096.5	050.2	049.9	100.0000	0191.1	042.4	71.83	
199.0	100.0000	0096.8	050.3	048.9	100.0000	0191.6	041.9	72.08	
200.0	100.0000	0096.8	050.3	047.9	100.0000	0193.0	041.5	72.34	
201.0	100.0000	0096.1	050.1	046.7	100.0000	0194.7	041.2	72.55	
202.0	100.0000	0095.0	049.9	045.5	100.0000	0195.9	041.0	72.69	
203.0	100.0000	0094.0	049.7	044.2	100.0000	0196.5	040.9	72.79	

Exhibit 7c
Contour Protection Studies Toward Select Allocation Concern(s)

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
204.0	100.0000	0093.7	049.6	043.1	100.0000	0197.0	040.6	72.93
205.0	100.0000	0094.3	049.8	042.0	100.0000	0197.4	040.3	73.12
206.0	100.0000	0095.0	049.9	040.8	100.0000	0197.4	039.9	73.30
207.0	100.0000	0095.1	049.9	039.6	100.0000	0196.6	039.6	73.37
208.0	100.0000	0094.8	049.9	038.4	100.0000	0194.1	039.5	73.31
209.0	100.0000	0095.1	049.9	037.1	100.0000	0190.9	039.3	73.25
210.0	100.0000	0095.8	050.1	035.9	100.0000	0188.9	039.1	73.28
211.0	100.0000	0096.9	050.3	034.6	100.0000	0187.8	038.8	73.37
212.0	100.0000	0098.3	050.5	033.4	100.0000	0187.7	038.5	73.52
213.0	100.0000	0099.9	050.9	032.0	100.0000	0188.3	038.1	73.70
214.0	100.0000	0101.0	051.1	030.7	100.0000	0188.9	038.0	73.81
215.0	100.0000	0101.3	051.1	029.3	100.0000	0189.8	038.0	73.85
216.0	100.0000	0101.1	051.1	028.0	100.0000	0191.5	038.1	73.86
217.0	100.0000	0100.8	051.0	026.7	100.0000	0193.6	038.3	73.87
218.0	100.0000	0100.3	050.9	025.4	100.0000	0195.5	038.6	73.83
219.0	100.0000	0099.6	050.8	024.2	100.0000	0197.0	038.9	73.74
220.0	100.0000	0098.8	050.7	023.0	100.0000	0197.7	039.3	73.60
221.0	100.0000	0098.2	050.5	021.8	100.0000	0198.0	039.7	73.43
222.0	100.0000	0097.4	050.4	020.7	100.0000	0198.3	040.1	73.23
223.0	100.0000	0096.1	050.1	019.7	100.0000	0198.2	040.7	72.97
224.0	100.0000	0094.5	049.8	018.8	100.0000	0197.8	041.3	72.65
225.0	100.0000	0093.0	049.5	017.9	100.0000	0197.5	042.0	72.35
226.0	100.0000	0091.9	049.3	017.0	100.0000	0197.2	042.6	72.06
227.0	100.0000	0091.0	049.1	016.1	100.0000	0196.8	043.1	71.79
228.0	100.0000	0090.3	049.0	015.2	100.0000	0196.0	043.7	71.50
229.0	100.0000	0090.0	048.9	014.4	100.0000	0194.5	044.2	71.20
230.0	100.0000	0090.1	048.9	013.4	100.0000	0192.6	044.7	70.91
231.0	100.0000	0090.7	049.0	012.5	100.0000	0189.9	045.1	70.60
232.0	100.0000	0091.8	049.3	011.4	100.0000	0186.3	045.5	70.28
233.0	100.0000	0092.9	049.5	010.5	100.0000	0182.3	045.9	69.93
234.0	100.0000	0093.8	049.7	009.5	100.0000	0179.3	046.4	69.60
235.0	100.0000	0094.4	049.8	008.7	100.0000	0177.6	046.9	69.30
236.0	100.0000	0094.8	049.9	007.9	100.0000	0176.2	047.5	69.00
237.0	100.0000	0094.8	049.9	007.2	100.0000	0175.0	048.1	68.70
238.0	100.0000	0094.5	049.8	006.6	100.0000	0174.1	048.8	68.38
239.0	100.0000	0093.7	049.6	006.1	100.0000	0173.6	049.6	68.05
240.0	100.0000	0092.5	049.4	005.7	100.0000	0173.3	050.4	67.71
241.0	100.0000	0091.2	049.1	005.4	100.0000	0172.9	051.3	67.37
242.0	100.0000	0090.2	048.9	005.1	100.0000	0172.6	052.1	67.04
243.0	100.0000	0089.7	048.8	004.6	100.0000	0172.2	052.9	66.72
244.0	100.0000	0089.4	048.8	004.2	100.0000	0171.6	053.7	66.40
245.0	100.0000	0088.7	048.6	003.9	100.0000	0171.0	054.5	66.06
246.0	100.0000	0087.7	048.4	003.7	100.0000	0170.5	055.3	65.72

Exhibit 7c

Contour Protection Studies Toward Select Allocation Concern(s)

01-02-2024 Terrain Data: FCC NGDC 30 Sec FMOver Analysis

KXCV BMLED20180420AAP

KLOX.P

Channel = 213C1
 Max ERP = 100 kW
 RCAMSL = 521.5 m
 N. Lat. 40 24 09.00
 W. Lng. 94 53 16.90
 Protected
 60 dBu

Channel = 215C1
 Max ERP = 100 kW
 RCAMSL = 482 m
 N. Lat. 41 04 38.00
 W. Lng. 94 19 10.00
 Interfering
 100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
347.0	100.0000	0179.4	061.8	256.8	100.0000	0085.5	063.3	58.02	
348.0	100.0000	0178.8	061.8	256.7	100.0000	0085.6	062.3	58.36	
349.0	100.0000	0178.7	061.8	256.6	100.0000	0085.6	061.2	58.71	
350.0	100.0000	0178.2	061.7	256.5	100.0000	0085.7	060.1	59.07	
351.0	100.0000	0177.0	061.6	256.3	100.0000	0085.9	059.1	59.44	
352.0	100.0000	0174.9	061.4	256.0	100.0000	0086.3	058.0	59.83	
353.0	100.0000	0173.0	061.2	255.7	100.0000	0086.7	057.0	60.22	
354.0	100.0000	0171.5	061.0	255.4	100.0000	0087.0	055.9	60.62	
355.0	100.0000	0170.1	060.9	255.1	100.0000	0087.4	054.9	61.02	
356.0	100.0000	0169.0	060.8	254.7	100.0000	0087.8	053.9	61.42	
357.0	100.0000	0168.6	060.7	254.4	100.0000	0088.0	052.9	61.82	
358.0	100.0000	0168.6	060.7	254.2	100.0000	0088.3	051.8	62.21	
359.0	100.0000	0168.4	060.7	253.8	100.0000	0088.5	050.8	62.61	
000.0	100.0000	0167.9	060.7	253.4	100.0000	0088.9	049.8	63.00	
001.0	100.0000	0167.4	060.6	253.0	100.0000	0089.2	048.8	63.39	
002.0	100.0000	0167.8	060.6	252.6	100.0000	0089.4	047.8	63.77	
003.0	100.0000	0169.3	060.8	252.4	100.0000	0089.5	046.8	64.16	
004.0	100.0000	0171.1	061.0	252.1	100.0000	0089.5	045.7	64.56	
005.0	100.0000	0172.6	061.2	251.8	100.0000	0089.5	044.7	64.96	
006.0	100.0000	0173.5	061.3	251.3	100.0000	0089.3	043.6	65.34	
007.0	100.0000	0174.8	061.4	250.8	100.0000	0089.1	042.6	65.71	
008.0	100.0000	0176.4	061.6	250.4	100.0000	0088.7	041.6	66.09	
009.0	100.0000	0178.2	061.7	249.9	100.0000	0088.3	040.6	66.47	
010.0	100.0000	0180.7	062.0	249.4	100.0000	0087.9	039.5	66.87	
011.0	100.0000	0184.5	062.3	249.0	100.0000	0087.6	038.4	67.31	
012.0	100.0000	0188.4	062.7	248.6	100.0000	0087.3	037.3	67.76	
013.0	100.0000	0191.5	063.0	248.0	100.0000	0087.0	036.2	68.19	
014.0	100.0000	0193.8	063.2	247.2	100.0000	0087.0	035.2	68.64	
015.0	100.0000	0195.7	063.4	246.3	100.0000	0087.5	034.2	69.13	
016.0	100.0000	0196.8	063.5	245.3	100.0000	0088.4	033.3	69.65	
017.0	100.0000	0197.2	063.5	244.0	100.0000	0089.4	032.5	70.14	
018.0	100.0000	0197.6	063.6	242.7	100.0000	0089.8	031.6	70.58	
019.0	100.0000	0197.9	063.6	241.2	100.0000	0090.9	030.9	71.08	

Exhibit 7c
Contour Protection Studies Toward Select Allocation Concern(s)

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
020.0	100.0000	0198.2	063.6	239.7	100.0000	0093.0	030.1	71.69
021.0	100.0000	0198.2	063.6	238.0	100.0000	0094.5	029.4	72.23
022.0	100.0000	0198.0	063.6	236.2	100.0000	0094.8	028.8	72.62
023.0	100.0000	0197.7	063.6	234.3	100.0000	0094.0	028.2	72.89
024.0	100.0000	0197.2	063.5	232.2	100.0000	0092.1	027.7	73.00
025.0	100.0000	0196.0	063.4	230.1	100.0000	0090.1	027.3	73.05
026.0	100.0000	0194.7	063.3	227.8	100.0000	0090.4	027.0	73.28
027.0	100.0000	0193.2	063.2	225.5	100.0000	0092.4	026.8	73.64
028.0	100.0000	0191.5	063.0	223.1	100.0000	0095.9	026.6	74.10
029.0	100.0000	0190.1	062.9	220.8	100.0000	0098.3	026.5	74.41
030.0	100.0000	0189.3	062.8	218.4	100.0000	0100.1	026.4	74.65
031.0	100.0000	0188.8	062.7	216.0	100.0000	0101.1	026.3	74.79
032.0	100.0000	0188.3	062.7	213.6	100.0000	0100.7	026.3	74.77
033.0	100.0000	0187.8	062.6	211.3	100.0000	0097.2	026.4	74.40
034.0	100.0000	0187.7	062.6	208.9	100.0000	0095.0	026.5	74.12
035.0	100.0000	0188.0	062.7	206.5	100.0000	0095.2	026.6	74.07
036.0	100.0000	0189.0	062.8	204.2	100.0000	0093.7	026.7	73.86
037.0	100.0000	0190.7	062.9	201.8	100.0000	0095.3	026.8	73.93
038.0	100.0000	0193.1	063.1	199.4	100.0000	0096.8	026.9	74.02
039.0	100.0000	0195.5	063.4	197.1	100.0000	0096.3	027.1	73.86
040.0	100.0000	0197.0	063.5	194.8	100.0000	0096.4	027.4	73.66
041.0	100.0000	0197.5	063.6	192.7	100.0000	0094.5	027.8	73.18
042.0	100.0000	0197.4	063.6	190.8	100.0000	0092.8	028.4	72.66
043.0	100.0000	0197.1	063.5	189.0	100.0000	0094.2	029.0	72.42
044.0	100.0000	0196.7	063.5	187.2	100.0000	0096.8	029.7	72.29
045.0	100.0000	0196.2	063.4	185.6	100.0000	0096.9	030.4	71.90
046.0	100.0000	0195.4	063.4	184.2	100.0000	0095.8	031.2	71.38
047.0	100.0000	0194.3	063.3	182.9	100.0000	0094.5	032.1	70.84
048.0	100.0000	0192.8	063.1	181.7	100.0000	0094.6	032.9	70.43
049.0	100.0000	0191.5	063.0	180.6	100.0000	0095.3	033.8	70.08
050.0	100.0000	0191.1	063.0	179.4	100.0000	0096.0	034.7	69.74
051.0	100.0000	0191.3	063.0	178.3	100.0000	0096.0	035.6	69.35
052.0	100.0000	0191.5	063.0	177.2	100.0000	0095.4	036.4	68.90
053.0	100.0000	0191.5	063.0	176.3	100.0000	0094.8	037.4	68.44
054.0	100.0000	0191.5	063.0	175.4	100.0000	0094.4	038.3	67.99
055.0	100.0000	0191.4	063.0	174.6	100.0000	0094.1	039.2	67.56
056.0	100.0000	0191.1	063.0	173.9	100.0000	0094.1	040.2	67.15
057.0	100.0000	0190.2	062.9	173.3	100.0000	0094.4	041.2	66.75
058.0	100.0000	0189.1	062.8	172.8	100.0000	0094.7	042.3	66.36
059.0	100.0000	0188.2	062.7	172.3	100.0000	0095.2	043.3	65.99
060.0	100.0000	0188.0	062.7	171.8	100.0000	0095.7	044.3	65.63
061.0	100.0000	0188.2	062.7	171.3	100.0000	0095.9	045.4	65.25
062.0	100.0000	0188.3	062.7	170.8	100.0000	0095.9	046.4	64.85