

Engineering Statement
Construction Permit Application for Auxiliary Facility Power Increase
KTXH Houston, TX Channel 19
July 25, 2023

The purpose of this application is to increase the effective radiated power (ERP) of the licensed auxiliary facility (File No. BXLCDT20071206ADE) from 520 kW to 1,000 kW. A TVStudy analysis using the default settings indicates the proposal will not cause any new interference above the de minimis limit (A copy of the analysis results are provided in Appendix A below). It is further noted and is also shown in Appendix B that the noise limited contour (NLC) of the proposed facility will remain inside the NLC of the licensed main facility.

Although the 1,000 kW effective radiated power (ERP) is above that allowed for the height, it should be considered permissible in that it does not exceed that of the licensed main facility and the overall coverage area is smaller than that provided by the main facility.

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Appendix A

tvstudy v2.2.5 (4uoc83)

Database: localhost, Study: 02129_07242023_KTXH_51569, Model: Longley-Rice

Start: 2023.07.24 10:36:38

Study created: 2023.07.24 10:36:38

Study build station data: LMS TV 2023-07-23

Proposal: KTXH D19 DX APP HOUSTON, TX

File number: 02129_07242023_KTXH_51569

Facility ID: 51569

Station data: User record

Record ID: 1871

Country: U.S.

Zone: III

Search options:

Non-U.S. records included

Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KVHP	D18	DT	LIC	LAKE CHARLES, LA	BLANK0000064019	203.1 km
No	KAJN-CD	D19	DC	LIC	LAFAYETTE, LA	BLANK0000063952	343.1
No	KARD	D19	DT	LIC	WEST MONROE, LA	BLANK0000063972	424.8
Yes	KGBS-CD	D19	DC	CP	AUSTIN, TX	BLANK00000204853	236.2
Yes	KGBS-CD	D19	DC	LIC	AUSTIN, TX	BLDTL20141118ARA	236.2
No	KSCC	D19	DT	LIC	CORPUS CHRISTI, TX	BLANK00000108393	286.4
Yes	KTVT	D19	DT	LIC	FORT WORTH, TX	BLANK00000203476	358.9
No	KLDO-TV	D19	DT	LIC	LAREDO, TX	BLCDT20110421ABF	452.1
No	KLTL-TV	D20	DT	LIC	LAKE CHARLES, LA	BLEDT20100216ABR	258.7
Yes	KUVM-CD	D20	DC	LIC	MISSOURI CITY, TX	BLANK00000071589	0.0
No	KAVU-TV	D20	DT	LIC	VICTORIA, TX	BLANK00000112500	175.9
No	XERV	D19	DT	LIC	REYNOSA, TA	BLANKBPFS20160318ABA	463.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D19

Latitude: 29 33 45.20 N (NAD83)
Longitude: 95 30 35.90 W
Height AMSL: 554.8 m
HAAT: 536.0 m
Peak ERP: 1000 kW
Antenna: DIE-TFU-24WB-R WC (ID 70460) 35.0 deg
Elev Pattn: Generic
Elec Tilt: 0.75

39.3 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	811 kW	534.9 m	118.6 km
45.0	984	537.2	120.6
90.0	604	536.2	115.9
135.0	238	535.9	107.4
180.0	53.4	537.0	94.3
225.0	141	535.9	102.7
270.0	86.4	534.7	98.3
315.0	375	530.6	111.2

Database HAAT does not agree with computed HAAT
Database HAAT: 536 m Computed HAAT: 535 m

ERP exceeds maximum
ERP: 1000 kW ERP maximum: 429 kW

Distance to Canadian border: 1765.2 km

Distance to Mexican border: 422.3 km

Conditions at FCC monitoring station: Kingsville TX
Bearing: 225.1 degrees Distance: 330.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 325.6 degrees Distance: 1468.3 km

No land mobile station failures found

Study cell size: 2.00 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%

Interference to BLANK0000204853 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance				
Desired:	KGBS-CD	D19	DC	CP	AUSTIN, TX	BLANK0000204853					
Undesireds:	KTXH	D19	DT	BL	HOUSTON, TX	DTVBL51569	236.2 km				
	KTXH	D19	DX	APP	HOUSTON, TX	02129_07242023_KTXH_51	236.2				
	KNIC-DT	D18	DT	LIC	BLANCO, TX	BLCDT20091019ADG	97.8				
	KTVT	D19	DT	LIC	FORT WORTH, TX	BLANK0000203476	259.3				
	KHPM-CD	D20	DC	LIC	SAN MARCOS, TX	BLANK0000074893	50.1				
Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX				
10267.3	1,703,194	10114.7	1,688,992	10034.3	1,670,685	10062.4	1,671,426	-0.28	-0.04		
Undesired	Total IX		Unique IX, before		Unique IX, after						
KTXH D19 DT BL	52.2	1,321	36.1	964							
KTXH D19 DX APP	24.1	580			8.0	223					
KNIC-DT D18 DT LIC	8.0	144	8.0	144	8.0	144					
KTVT D19 DT LIC	20.1	357	4.0	0	4.0	0					
KHPM-CD D20 DC LIC	16.1	16,842	16.1	16,842	16.1	16,842					

Interference to BLDTL20141118ARA LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance				
Desired:	KGBS-CD	D19	DC	LIC	AUSTIN, TX	BLDTL20141118ARA					
Undesireds:	KTXH	D19	DT	BL	HOUSTON, TX	DTVBL51569	236.2 km				
	KTXH	D19	DX	APP	HOUSTON, TX	02129_07242023_KTXH_51	236.2				
	KTVT	D19	DT	LIC	FORT WORTH, TX	BLANK0000203476	259.7				
Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX				
5506.0	1,525,697	5445.9	1,522,709	5425.9	1,520,235	5429.9	1,520,235	-0.07	0.00		
Undesired	Total IX		Unique IX, before		Unique IX, after						
KTXH D19 DT BL	12.0	2,455	8.0	2,436							
KTXH D19 DX APP	4.0	2,436			4.0	2,436					
KTVT D19 DT LIC	12.0	38	8.0	19	12.0	38					

Interference to BLANK0000203476 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KTVT	D19	DT	LIC	FORT WORTH, TX	BLANK0000203476	
Undesireds:	KTXH	D19	DT	BL	HOUSTON, TX	DTVBL51569	358.9 km
	KTXH	D19	DX	APP	HOUSTON, TX	02129_07242023_KTXH_51	358.9
	KAUT-TV	D19	DT	LIC	OKLAHOMA CITY, OK	BLANK0000121785	339.8
	KGBS-CD	D19	DC	CP	AUSTIN, TX	BLANK0000204853	259.3
	KFXK-TV	D20	DT	LIC	LONGVIEW, TX	BLANK0000071623	191.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
45710.0 6,913,126	45344.1 6,909,845	45164.0 6,907,928	45176.0 6,907,936	-0.03 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KTXH D19 DT BL 24.0	30	24.0	30
KTXH D19 DX APP 12.1	22	12.1	22
KAUT-TV D19 DT LIC 127.9	1,362	127.9	1,362
KGBS-CD D19 DC CP 4.1	8	4.1	8
KFXK-TV D20 DT LIC 24.2	517	24.2	517

Interference to BLANK0000203476 LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KTVT	D19	DT	LIC	FORT WORTH, TX	BLANK0000203476	
Undesireds:	KTXH	D19	DT	BL	HOUSTON, TX	DTVBL51569	358.9 km
	KTXH	D19	DX	APP	HOUSTON, TX	02129_07242023_KTXH_51	358.9
	KAUT-TV	D19	DT	CP	OKLAHOMA CITY, OK	BLANK0000127590	339.8
	KGBS-CD	D19	DC	CP	AUSTIN, TX	BLANK0000204853	259.3
	KFXK-TV	D20	DT	LIC	LONGVIEW, TX	BLANK0000071623	191.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
45710.0 6,913,126	45344.1 6,909,845	45152.1 6,907,849	45164.0 6,907,857	-0.03 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KTXH D19 DT BL 24.0	30	24.0	30
KTXH D19 DX APP 12.1	22	12.1	22
KAUT-TV D19 DT CP 139.8	1,441	139.8	1,441
KGBS-CD D19 DC CP 4.1	8	4.1	8
KFXK-TV D20 DT LIC 24.2	517	24.2	517

Interference to BLANK0000203476 LIC scenario 3

Desired:	Call KTVT	Chan D19	Svc DT	Status LIC	City, State FORT WORTH, TX	File Number BLANK0000203476	Distance
Undesireds:	KTXH	D19	DT	BL	HOUSTON, TX	DTVBL51569	358.9 km
	KTXH	D19	DX	APP	HOUSTON, TX	02129_07242023_KTXH_51	358.9
	KAUT-TV	D19	DT	LIC	OKLAHOMA CITY, OK	BLANK0000121785	339.8
	KFXK-TV	D20	DT	LIC	LONGVIEW, TX	BLANK0000071623	191.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
45710.0 6,913,126		45344.1 6,909,845		45168.1 6,907,936		45180.1 6,907,944	-0.03 -0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
KTXH D19 DT BL		24.0 30		24.0 30			
KTXH D19 DX APP		12.1 22				12.1 22	
KAUT-TV D19 DT LIC		127.9 1,362		127.9 1,362		127.9 1,362	
KFXK-TV D20 DT LIC		24.2 517		24.2 517		24.2 517	

Interference to BLANK0000203476 LIC scenario 4

Desired:	Call KTVT	Chan D19	Svc DT	Status LIC	City, State FORT WORTH, TX	File Number BLANK0000203476	Distance
Undesireds:	KTXH	D19	DT	BL	HOUSTON, TX	DTVBL51569	358.9 km
	KTXH	D19	DX	APP	HOUSTON, TX	02129_07242023_KTXH_51	358.9
	KAUT-TV	D19	DT	CP	OKLAHOMA CITY, OK	BLANK0000127590	339.8
	KFXK-TV	D20	DT	LIC	LONGVIEW, TX	BLANK0000071623	191.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
45710.0 6,913,126		45344.1 6,909,845		45156.1 6,907,857		45168.1 6,907,865	-0.03 -0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
KTXH D19 DT BL		24.0 30		24.0 30			
KTXH D19 DX APP		12.1 22				12.1 22	
KAUT-TV D19 DT CP		139.8 1,441		139.8 1,441		139.8 1,441	
KFXK-TV D20 DT LIC		24.2 517		24.2 517		24.2 517	

Interference to BLANK0000071589 LIC scenario 1

Desired:	Call KUVM-CD	Chan D20	Svc DC	Status LIC	City, State MISSOURI CITY, TX	File Number BLANK0000071589	Distance
Undesireds:	KTXH	D19	DT	BL	HOUSTON, TX	DTVBL51569	0.0 km
	KTXH	D19	DX	APP	HOUSTON, TX	02129_07242023_KTXH_51	0.0

KZJL	D21	DT	LIC	HOUSTON, TX	BLANK0000072328	0.0
Service area	Terrain-limited		IX-free, before		IX-free, after	
5809.1 4,646,177	5809.1	4,646,177	4857.4	4,449,142	4877.3	4,469,388
				Percent New IX		-0.41 -0.46
Undesired		Total IX		Unique IX, before		Unique IX, after
KTXH D19 DT BL	599.5	134,354	83.8	26,794		
KTXH D19 DX APP	368.0	97,962			63.9	6,548
KZJL D21 DT LIC	867.9	170,241	352.1	62,681	563.8	78,827

Interference to proposal scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KTXH	D19	DX	APP	HOUSTON, TX	02129_07242023_KTXH_51	
Undesireds: KGBS-CD	D19	DC	CP	AUSTIN, TX	BLANK0000204853	236.2 km
KTVT	D19	DT	LIC	FORT WORTH, TX	BLANK0000203476	358.9

Service area	Terrain-limited		IX-free		Percent IX	
37314.8 6,066,726	37290.7	6,066,605	37138.4	6,065,239	0.41	0.02
Undesired		Total IX		Unique IX		Prcnt Unique IX
KGBS-CD D19 DC CP	28.1	443	12.1	132	0.03	0.00
KTVT D19 DT LIC	140.3	1,234	124.2	923	0.33	0.02

Interference to proposal scenario 2

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KTXH	D19	DX	APP	HOUSTON, TX	02129_07242023_KTXH_51	
Undesireds: KGBS-CD	D19	DC	LIC	AUSTIN, TX	BLDTL20141118ARA	236.2 km
KTVT	D19	DT	LIC	FORT WORTH, TX	BLANK0000203476	358.9

Service area	Terrain-limited		IX-free		Percent IX	
37314.8 6,066,726	37290.7	6,066,605	37146.5	6,065,360	0.39	0.02
Undesired		Total IX		Unique IX		Prcnt Unique IX
KGBS-CD D19 DC LIC	20.0	322	4.0	11	0.01	0.00
KTVT D19 DT LIC	140.3	1,234	124.2	923	0.33	0.02

