

Exhibit A
Technical Exhibit



Kessler and Gehman Associates, Inc.

Telecommunications Consulting Engineers

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A PETITION FOR RECONSIDERATION OF THE SEVENTH REPORT AND ORDER AND EIGHTH FURTHER NOTICE OF PROPOSED RULE MAKING WITH RESPECT TO THE UNIVERSITY OF ALASKA (UOA) POST-TRANSITION DIGITAL BROADCAST FACILITY, KUAC-DT CHANNEL *9, FAIRBANKS, ALASKA.

The firm Kessler and Gehman Associates, Inc. (KGA) has been retained by University of Alaska (UOA), licensee of digital broadcast facility KUAC-TV Channel *9, to prepare an engineering analysis in support of a Petition for Reconsideration of the Seventh Report and Order and Eighth Further Notice of Proposed Rule Making (7th R&O) with respect to the operating parameters assigned to the KUAC-DT Channel *9 post-transition facility as adopted in the Final DTV Table of Allotments (TOA).

Discussion

The purpose of this engineering statement is to respectfully bring to the Commission's attention that the UOA's post-transition broadcast facility, KUAC-DT Channel *9, as depicted in the Final DTV Table of Allotments (TOA) will fall well short of feeding the UOA's four authorized digital translators which are critical for serving the communities surrounding Fairbanks, AK. The licensed KUAC-TV Channel *9 facility currently feeds four licensed UOA analog translators (K05FI, K05HI, K06JX and K07ND) which serve the public in multiple towns surrounding the principal community of Fairbanks, AK. The public would be adversely impacted if, after the transition, it could no longer receive the critical public television content that it currently enjoys from the licensed KUAC-TV Channel *9 due to the inability to feed the surrounding authorized UOA digital translators as a result of insufficient power.



The UOA filed comments in January 2007 notifying the Commission that the proposed DTV TOA, as depicted in the Seventh Further Notice of Proposed Rule Making (7th FNPRM), specified an incorrect antenna ID and antenna HAAT. The Final DTV TOA, as depicted in the 7th R&O, demonstrated that the Commission changed the antenna ID from No. 74463 to No. 80229 which was an improvement; however, it was not changed to nondirectional. The KUAC-TV and KUAC-DT facilities are licensed to operate using nondirectional antennas and, if required to use the directional pattern depicted in the Final DTV TOA (Antenna ID 80229) for KUAC-DT Channel *9 post-transition facility, would result in major delays with respect to building its post-transition DTV facility and would cause an unnecessary financial burden. Also, the Final DTV TOA revealed that the antenna HAAT was not changed from 152 m to 163 m as requested in the UOA January 2007 filing. Again, the post-transition KUAC-DT Channel *9 facility will operate using the existing KUAC-TV Channel *9 top-mount antenna that has a licensed antenna height radiation center of 163 m AAT.

The UOA also retained KGA to determine if the parameters of the KUAC-DT Channel *9 post-transition facility, as depicted in the Final DTV TOA, would provide at least the minimum signal strength required for digital reception at the aforementioned four surrounding authorized UOA digital translators. It is well documented that digital signals, unlike analog, have a cliff effect where there is a sudden loss in reception when signal strength is not adequate. The 3.2 kW ERP depicted in the Final DTV TOA for the KUAC-DT Channel *9 post-transition facility will not be sufficient to overcome to cliff effect which will result in the residents in the following Alaska towns adjacent to Fairbanks losing perhaps its only source of public television: 1) Manley Hot Springs; 2) Healy; 3) Delta Junction; 4) Big Delta; and 5) Anderson. This would have an impact to a predicted 5,559 persons according to U.S. Census 2005 Estimation Data. Of course, this is not a problem with the licensed 46.8 kW analog facility because the reception does not go blank as the signal strength becomes weaker at further distances.

Exhibit 1 is an interference-free Longley-Rice coverage map which pictorially depicts the predicted coverage area of the licensed KUAC-TV Channel *9 analog facility and the four UOA



translators that receive its signal to be translated. The licensed ERP for KUAC-TV Channel *9 is 16.7 dBk (46.8 kW). Exhibit 2 is an interference-free Longley-Rice coverage map which pictorially depicts the predicted coverage area of the KUAC-DT Channel *9 post-transition DTV facility as specified in the Final DTV TOA and the four UOA translators that would receive its signal to be translated. The ERP for the KUAC-DT Channel *9 Final TOA facility is 5.1 dBk (3.2 kW). Therefore, the KUAC-DT Final DTV TOA facility will take an instant 11.6 dB hit. Current generation professional cable television-type analog receivers have a signal reception threshold range on average from -20 dBmV to +30 dBmV (50 dB range) and current generation professional cable television-type digital receivers have a signal reception threshold range on average from -15 dBmV to +20 dBmV (35 dB range). Therefore, the post-transition KUAC-DT facility as specified in the Final DTV TOA not only needs to make up an additional 11.6 dB in ERP to maintain the same signal threshold as the licensed analog facility, it also has to make up an additional 5 dB to compensate for the reduced signal reception threshold for professional cable television-type receivers. Therefore, the KUAC-DT Channel *9 ERP as specified in the Final DTV TOA is 16.6 dB below the power required for the UOA's digital translators to receive an equivalent digital signal. Accordingly, the appropriate ERP for the KUAC-DT Final DTV TOA is 21.7 dBk (147.9 kW) which is in compliance with the maximum antenna height and power for a high-band digital VHF facility located in Zone 2 (16.6 dBk + 5.1 dBk).

Exhibit 3 is an interference-free Longley-Rice coverage map which depicts the predicted coverage area of the proposed KUAC-DT Channel *9 post-transition DTV facility with an ERP of 147.9 kW which is the minimum power required for the four UOA digital translators to receive its signal to be translated. The mountainous terrain plays a very big part in why it is so difficult for the UOA to reach its translators as can be seen by referring to KUAC terrain plot depicted in Exhibit 4.

Due to insufficient power as well as the "cliff effect" issue and severe terrain shielding that will surely limit the ability for the KUAC-DT Channel *9 digital post-transition facility from transmitting a sufficient signal for reception at the surrounding translator sites, the UOA



respectfully requests a post-transition ERP of 147.9 kW using an omnidirectional antenna with an antenna height radiation center of 163 m AAT.

The FCC stated in its 7th R&O (Para. 26) that when proposed changes to the DTV Table and/or Appendix B are consistent and do not create new post-transition interference to a TCD of more than 0.1%, the request is granted. The Commission also stated in paragraph 35 that it asked licensees to review the accuracy of their information contained in the proposed DTV Table Appendix B and comment on any inaccuracies or discrepancies in this information. The UOA did just as the FCC requested and filed comments in January 2007 based on, inter alia, an incorrect antenna ID and antenna height specified in the proposed DTV TOA. Accordingly, based on the Commission's comments in Para. 26 of the 7th R&O, the antenna ID should have been changed to ID No. 18548 and the antenna height AAT should have been changed to 163 meters as requested.

As stated in paragraph 25 of the 7th R&O, the Commission received comments and reply comments in response to the 7th FNPRM and its goal was to accommodate the requests made by commenters to the extent possible consistent with the standards outlined in the 7th FNPRM, and particularly the 0.1 percent interference standard. The Commission stated in paragraph 26 of the 7th R&O that proposed changes to the DTV Table and/or Appendix B that are consistent with the standards outlined in the 7th FNPRM and do not create new post-transition interference to a tentative channel designation (TCD) of more than 0.1 percent would be granted. Referring to the Longley-Rice map in Exhibit 5 and the population report generated from the Longley-Rice study in Exhibit 6, it can be seen that the proposed KUAC-DT Channel *9 facility with an ERP of 147.9 kW, an antenna height radiation center of 163 meters AAT and an omnidirectional antenna would be predicted to cause zero interference (0.0%). The only stations within the required culling distance in the Longley-Rice interference study were translators and even though they do not require protection from a full-service station, they would not receive interference (0.0%). Accordingly, the following parameters adopted in the Final DTV TOA should be changed: 1) change from a directional to a nondirectional antenna; 2) increase antenna



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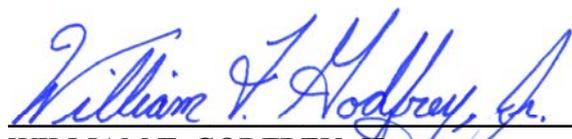
height radiation center AAT from 152 meters to 163 meters; and 3) increase the ERP from 3.2 kW to 147.9 kW.

Certification

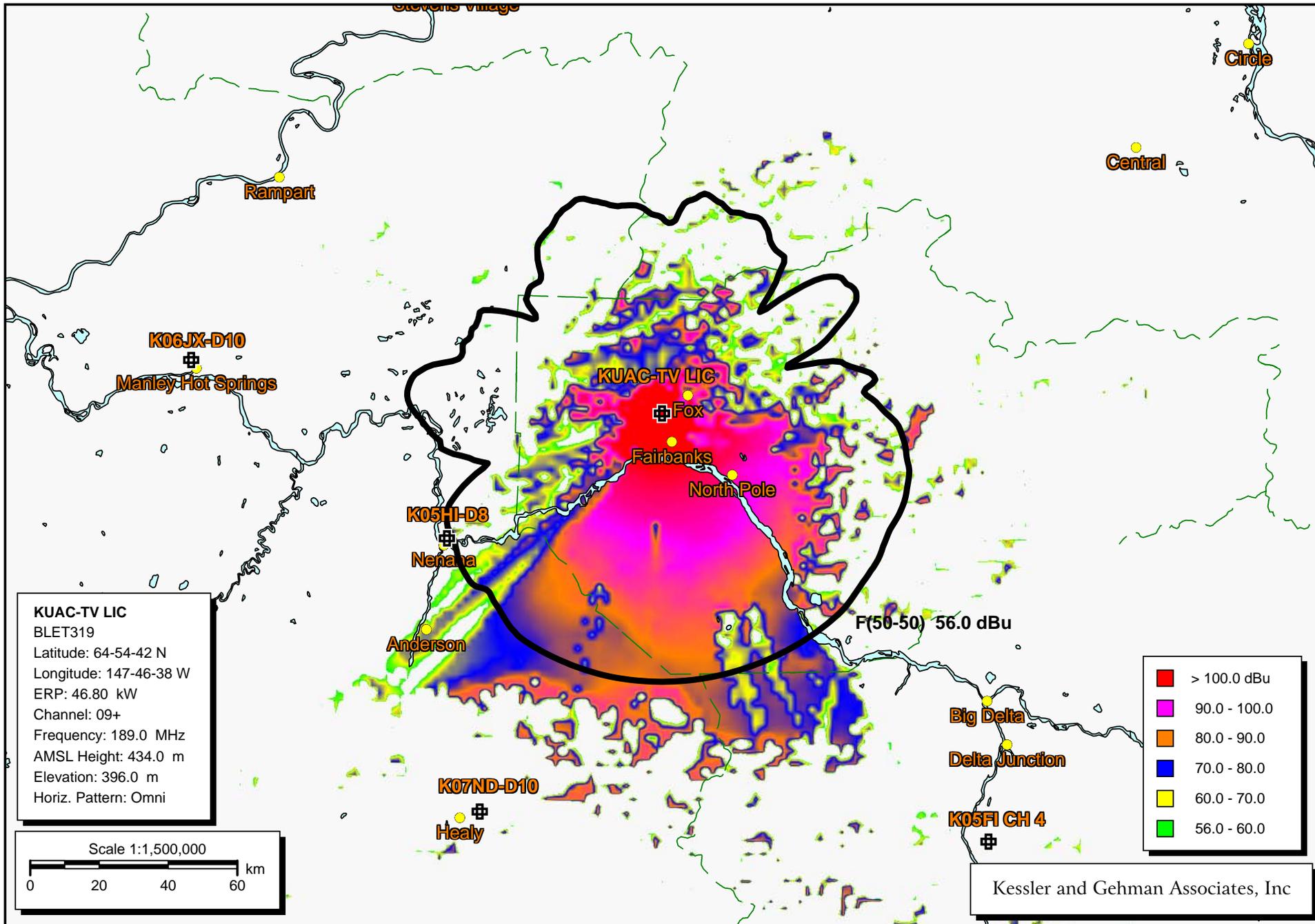
This technical statement was prepared by William T. Godfrey, Telecommunications Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



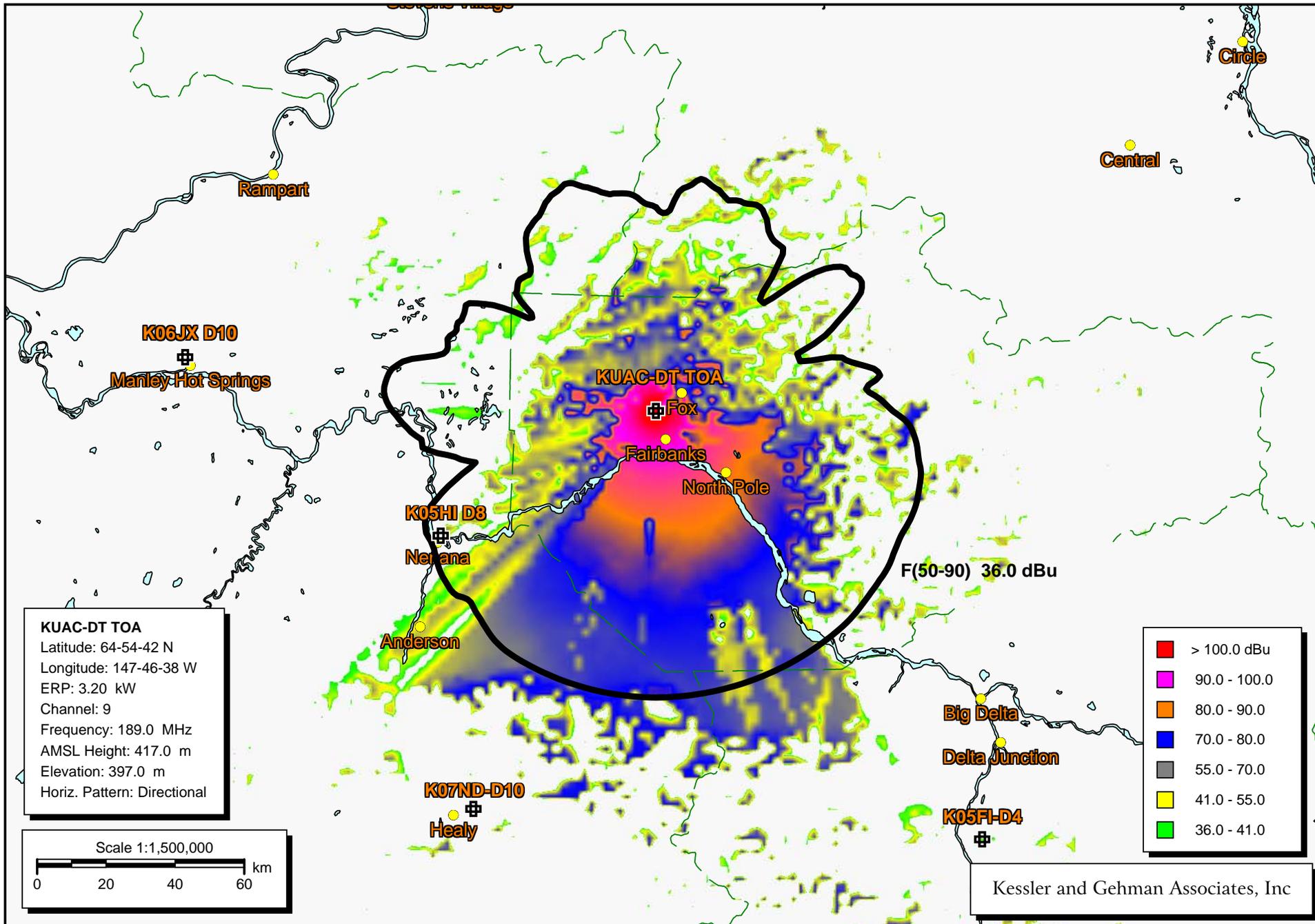
KESSLER AND GEHMAN ASSOCIATES, INC.


WILLIAM T. GODFREY, JR.
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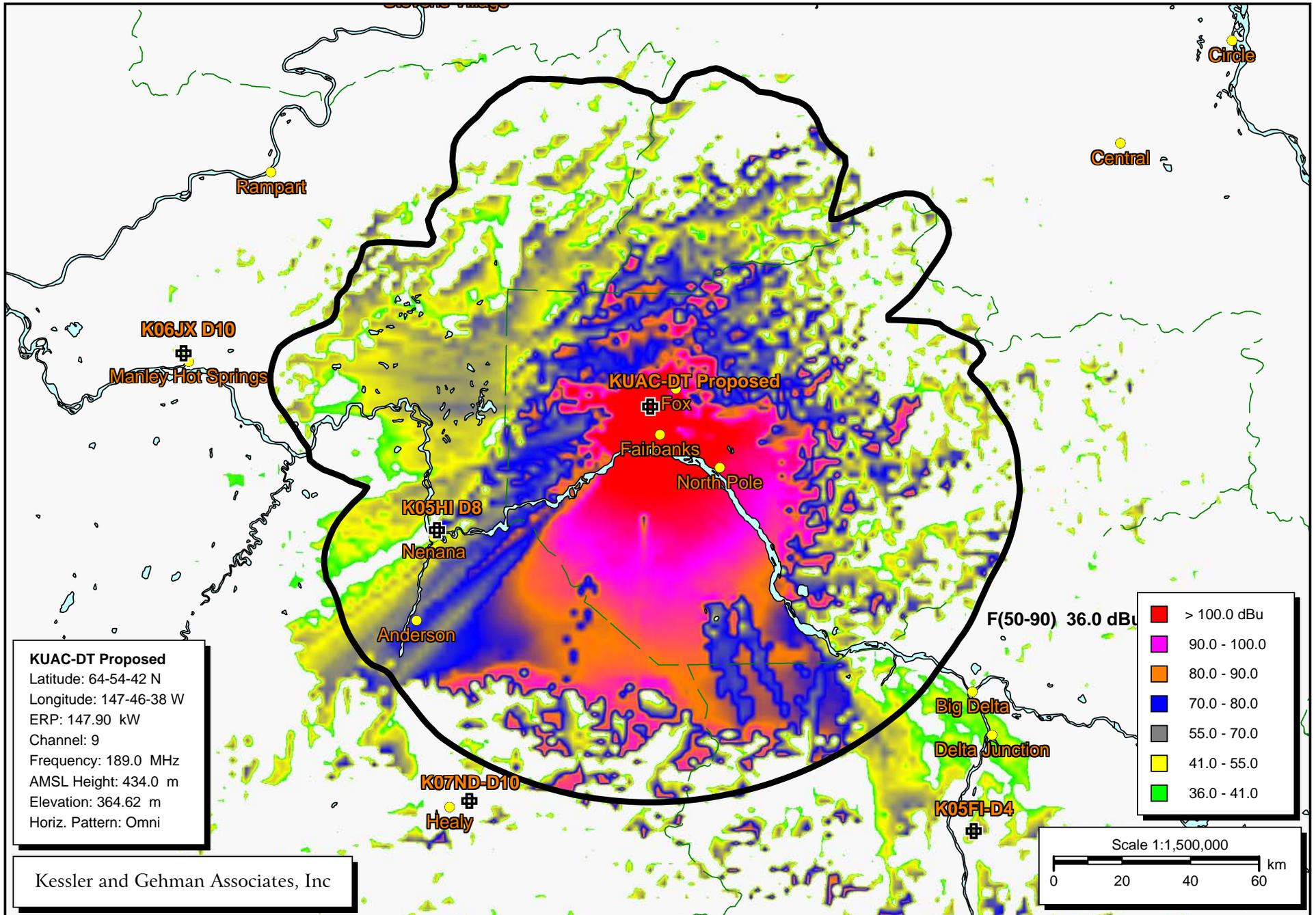
26 October, 2007



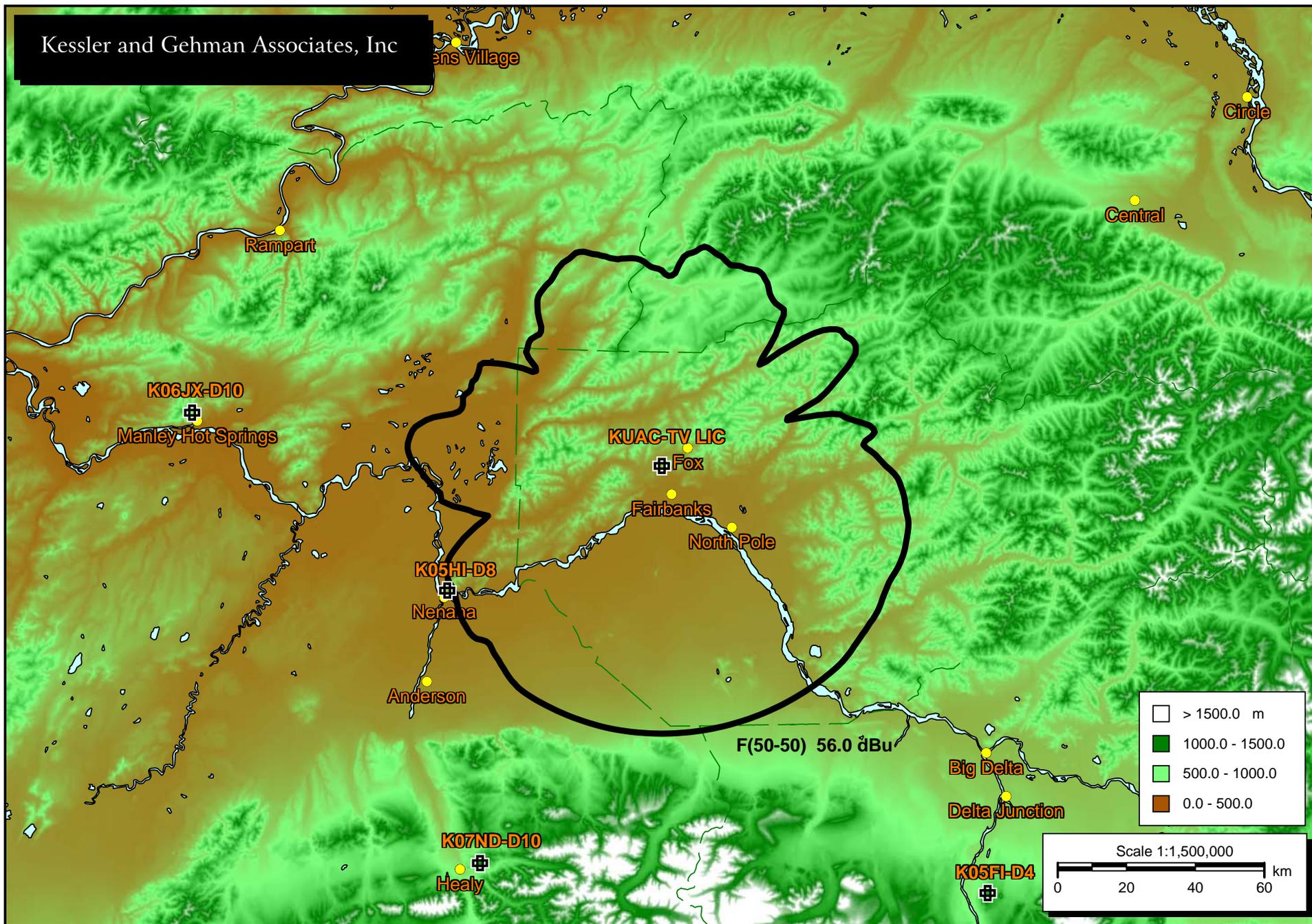
Licensed KUAC-TV Channel 9 Longley-Rice Interference-Free Coverage



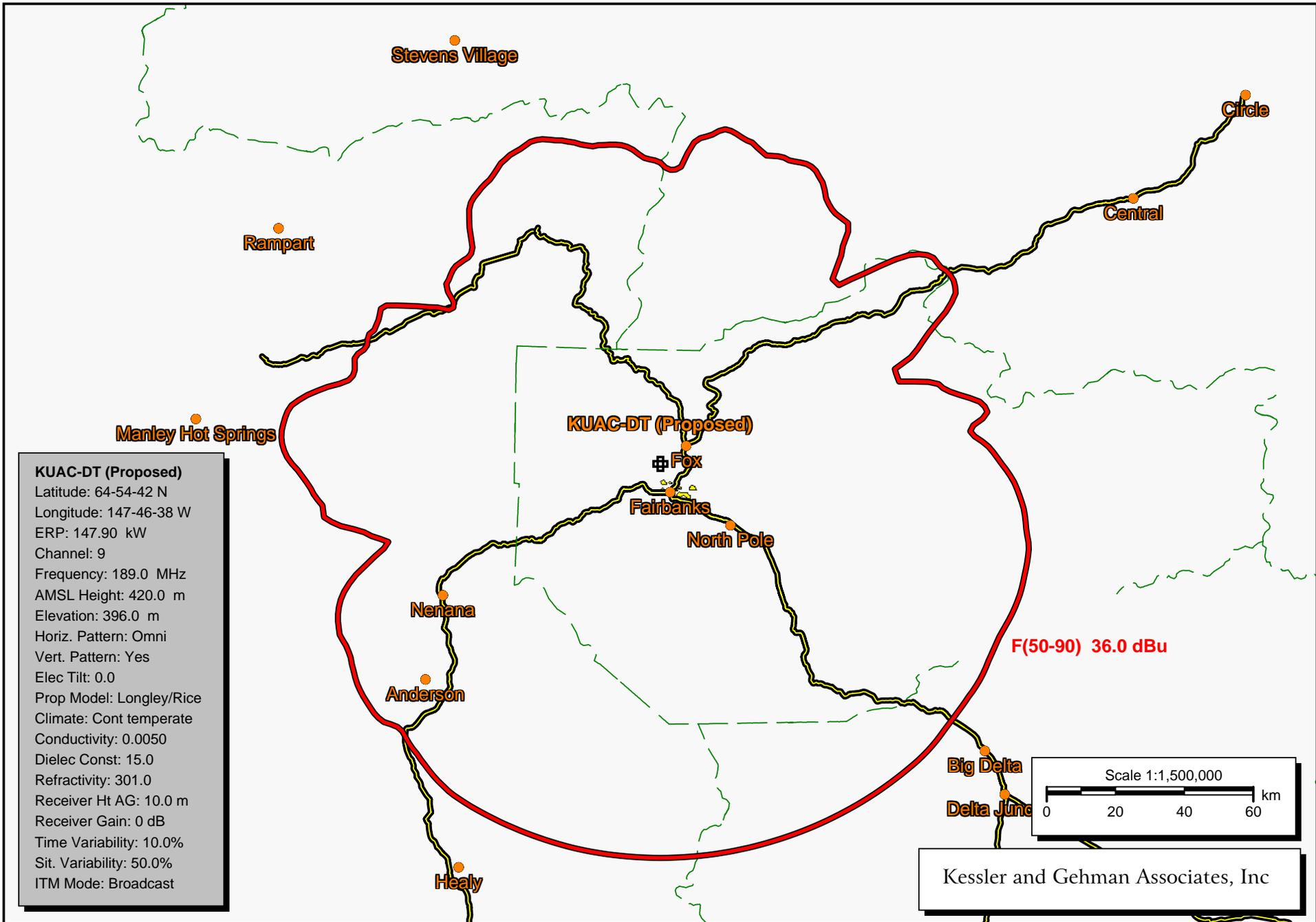
KUAC-DT Channel 9 (Final DTV TOA) Longley-Rice Interference-Free Coverage



Proposed KUAC-DT Channel 9 Longley-Rice Interference-Free Coverage



KUAC Terrain Plot



Outgoing Longley-Rice Interference Population Report

KUAC-DT (Proposed) (9) Fairbanks, AK
 Broadcast Type: Digital Service: T
 Lat: 64-54-42 N Lng: 147-46-38 W ERP: 147.9 kW AMSL: 420.0 m
 TV Outgoing Interference Study
 Signal Resolution: 2.0 km
 Consider NTSC Taboo: Yes
 # of radials computed for contours: 72
 Contours calculated using 8 radial HAAT.
 LR Profile Spacing Increment: 1.0 km
 Masked interference points are being counted as interference.
 Using LPTV/translator D/U rules.
 Pop Centroid DB: 2000 US Census (SF1,Housing)
 Study Date: 10/24/2007
 TV Database Date: 10/23/2007
 Primary Terrain: V-Soft 3 Second Alaska Terrain
 Secondary Terrain: V-Soft 3 Second US Terrain

Population Database: 2000 US Census (SF1)

 Stations Considered:

Call Letters	City	State	Dist	Bear
NEW-D.A (08)	Nenana	AK	72.0	239.9
K09QL (09N)	Allakaket, Etc.	AK	289.3	311.7
K09RD (09N)	Rampart	AK	130.0	301.6
K09QJ (09N)	Mentasta Lake	AK	294.9	136.7
K09QG (09N)	Chalkyitsik	AK	268.3	41.9
K09QQ (09N)	Beaver	AK	162.4	6.1
K09PX (09N)	Chistochina	AK	301.1	147.7
K09TT (09N)	Circle	AK	200.5	57.7
K09TE (09N)	Bettles	AK	284.8	323.1
K09SI (09N)	Cantwell	AK	178.2	198.0
K09TW (09N)	Venetie	AK	242.8	14.1
K09TD (09N)	Birch Creek	AK	177.6	328.9
K09SV (09N)	Stevens Village	AK	136.6	334.0

Call	Area	HUnits	Contour	Masked	Ix	Unmasked	Ix	%
NEW-D.A (08)	0.0	0	1,137		0		0	0.0
K09QL (09N)	0.0	0	44		0		0	0.0
K09RD (09N)	0.0	0	23		0		0	0.0
K09QJ (09N)	0.0	0	13		0		0	0.0
K09QG (09N)	0.0	0	44		0		0	0.0
K09QQ (09N)	0.0	0	61		0		0	0.0
K09PX (09N)	0.0	0	36		0		0	0.0
K09TT (09N)	0.0	0	3		0		0	0.0
K09TE (09N)	0.0	0	0		0		0	0.0
K09SI (09N)	0.0	0	38		0		0	0.0
K09TW (09N)	0.0	0	115		0		0	0.0
K09TD (09N)	0.0	0	0		0		0	0.0
K09SV (09N)	0.0	0	87		0		0	0.0

 Housing Units Population