

## **Application Purpose**

The purpose of this KAIO license modification is to update the licensed geographical coordinates. No other changes are proposed.

Since the updated geographic coordinates of the KAIO license and the updated geographic coordinates are separated at a distance of more than 3 seconds latitude and/or 3 seconds longitude, a Construction Permit Application is necessary as stated in 47 C.F.R Section 73.1690(c)(11).

No physical changes have occurred. There is no change in site elevation, center of radiation, overall tower height, or effective radiated power.

Exhibit 1 shows the coordinate spacing to all licensed and proposed facilities remains in compliance with 73.509 (contour protection) spacing requirements.

Exhibit 2 demonstrates continued coverage of the Community of License.

Exhibit 3 demonstrates continued compliance with the RF Radiation Guidelines.

## Channel Study

REFERENCE		CH# 213A - 90.5 MHz, Pwr= 0.5 kW, HAAT= 161.1 M, COR= 1708 M								DISPLAY DATES	
43 32 36.0 N.		Average Protected F(50-50)= 19.9 km								DATA 11-20-21	
111 53 13.0 W.		Omni-directional								SEARCH 11-24-21	
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
213A Idaho Falls	KAIO!	LIC	VN ID	75.5 255.5	0.07 BMLED20150826ABB	43 32 36.60 111 53 09.80	0.500 161	1708	---Reference---		
211D Idaho Falls	K211BD!	LIC	CN ID	252.1 72.0	10.63 BLFT20100414AAM	43 30 49.70 112 00 44.90	0.099 58	0.7 1530	5.6 Watersprings Ministries	-15.1*	2.2
212C2 Jackson	KUWJ	LIC	CN WY	95.3 276.1	91.88 BLED19921207KC	43 27 39.70 110 45 11.70	3.000 337	76.8 2489	46.3 University Of Wyoming	0.3	29.0
210C2 Alta	762732	APP	CN WY	64.0 244.4	48.01 0000167705	43 43 53.00 111 20 59.30	1.000 557	2.1 2617	41.4 University Of Wyoming	26.3	4.3
212C3 Pocatello	KZJB	LIC	VN ID	214.3 33.8	91.34 BLED20050727ACZ	42 51 45.70 112 31 05.90	0.910 314	57.8 1842	37.5 Watersprings Ministries	8.6	15.7
266D Pocatello	K266AF«!	LIC	DCN ID	204.5 24.4	23.41 BLFT20141212ABT	43 21 05.60 112 00 24.80	0.250	30.5 1774	20.7 Riverbend Communications,	9.5R	13.9M
213D Soda Springs	K213BB!	LIC	DHN ID	170.7 350.9	102.88 BLFT19891023TE	42 37 47.70 111 41 02.80	0.111 326	52.0 2146	12.6 Utah State University Of A	34.1	43.2
216C2 Pocatello	KISU-FM	LIC	VN ID	214.3 33.8	91.34 BLED20161220AAO	42 51 45.70 112 31 05.90	5.000 307	4.3 1830	52.0 Idaho State University	61.9	37.4
214C Twin Falls	KCIR	LIC	DCN ID	226.8 45.6	193.88 BLED20130215AAV	42 20 09.40 113 36 21.50	45.000 762	129.9 2543	87.9 Faith Communications Corp	39.6	64.5
214C3 West Yellowstone	KPWY	LIC	CN MT	17.4 197.7	118.57 BLED20121107AFZ	44 33 37.70 111 26 25.80	0.100 787	46.6 2953	29.9 Hi-Line Radio Fellowship I	49.2	54.4
06 -- Logan	KJDN-LD«	LI	DHN UT	184.9 4.8	184.15 0000157479	44 13 07.84 107 54 57.33	3.000	9.4 1826	17.2	26.6R	157.6M

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= - Zone 2, Co to 3rd adjacent.  
All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.  
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.

**KAIO.P**

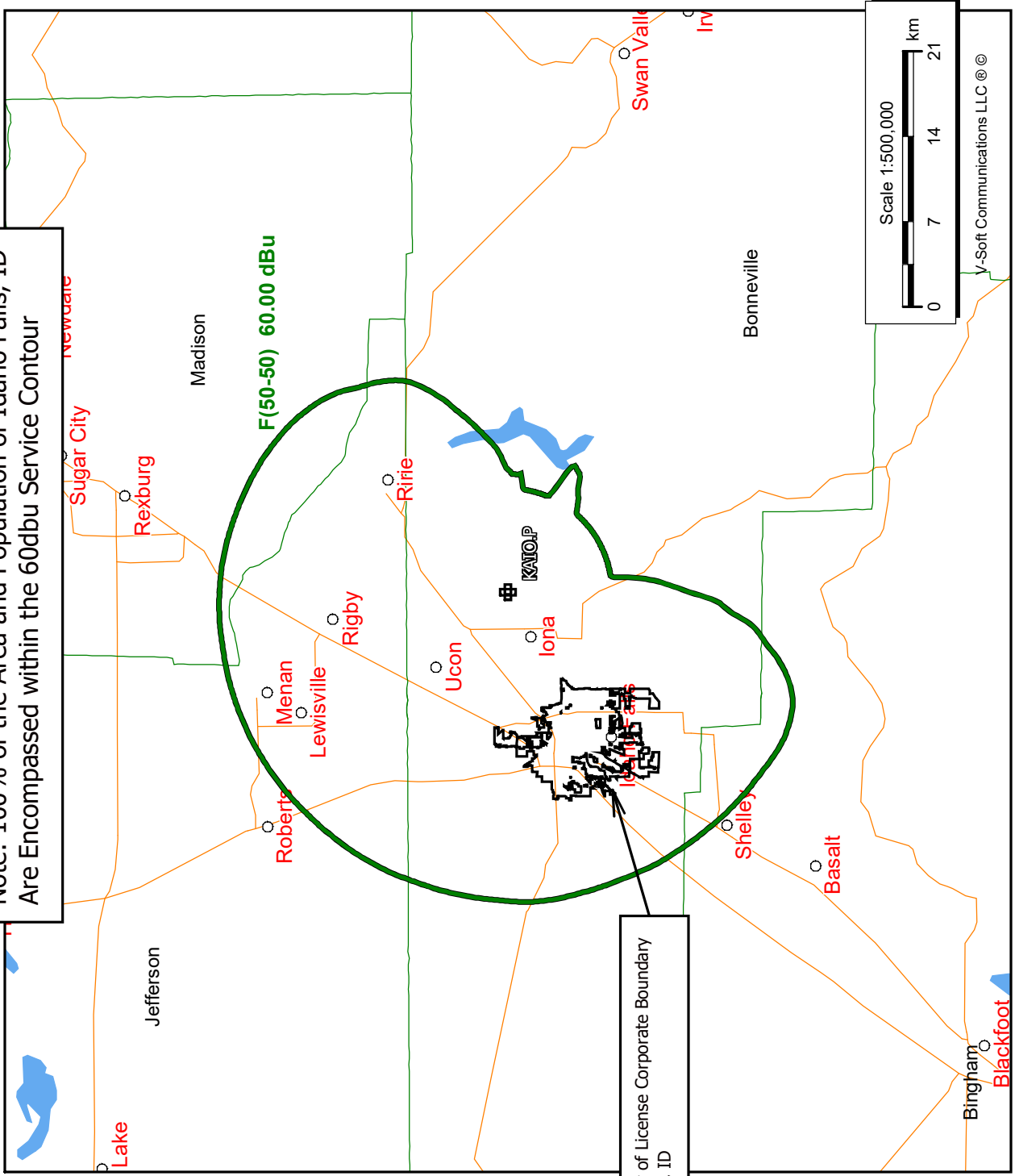
BMLED20150826ABB  
Latitude: 43-32-36 N  
Longitude: 111-53-13 W  
ERP: 0.50 kW  
Channel: 213  
Frequency: 90.5 MHz  
AMSL Height: 1708.0 m  
Elevation: 1688.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

**Community of License Coverage**

Idaho Falls, ID

Note: 100% of the Area and Population of Idaho Falls, ID  
Are Encompassed within the 60dbu Service Contour

Exhibit 2



Community of License Corporate Boundary  
Idaho Falls, ID

## **Environmental Protection**

KAIO operates using a 2-bay half-waved vertically polarized antenna.

According to OET 65, "Applicants and licensees should be able to calculate, based on considerations of frequency, power and antenna characteristics the distance from their transmitter where their signal produces an RF field equal to, or greater than, the 5% threshold limit. The applicant or licensee then shares responsibility for compliance in any accessible area or areas within this 5% "contour" where the appropriate limits are found to be exceeded."

The proposed facility's maximum RF contribution on the site is  $3.48\mu\text{W}/\text{cm}^2$  at a distance of 38 meters from the tower, which is 1.74% of the uncontrolled (public) exposure limit.

Therefore, because the proposed facility will not cause an RF field that is equal to or greater than 5% of the  $200\mu\text{W}/\text{cm}^2$  limit for uncontrolled exposure at any point, the proposed facility complies with the requirements of OET 65.

EMF will fully cooperate with other site users to temporarily reduce power or cease broadcasting, as necessary, to protect workers and others having access to the site from excessive levels of RF Radiation.