Micronet Communications, Inc.

812 Lexington Dr Plano, Texas 75075 972-422-7200

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: M2003814 5.93 GHz Licensee: Alaska Communications Internet, LLC

Pursuant to Parts 25.203 and 101.103(d) of the FCC Rules and Regulations, a frequency coordination study was conducted by Micronet Communications, Inc. for the following proposed earth station:

Red Dog Port, AK

The results of the study indicate that no unacceptable interference will result with existing, proposed or prior coordinated radio facilities.

Coordination was performed with existing, proposed and prior coordinated carriers within coordination range on the following dates:

02/14/2020 Original PCN (Expedited response requested by 02/28/2020)

There were no unresolved interference objections.

The attached coordination data was forwarded on the latest date to the following parties within coordination range or their authorized coordination agents:

COMSEARCH INC
TECK ALASKA INCORPORATED/TECK AMERICA INCORPORATED
UNICOM, INC.
WIRELESS APPLICATIONS CORP

Respectfully Submitted,

Jeremy S. Lewis

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Jeremy Lewis Systems Engineer

Attached: 1 data sheet

Micronet Communications, Inc. 812 Lexington Dr Plano, Texas 75075 972-422-7200

File: M2003814

TECHNICAL CHARACTERISTIC	CS OF TRANSM	IT ONLY EAR	TH STATION
	========	=======	===========
<u> </u>	laska Commun	ications In	ternet, LLC
	ed Dog Port,	AK	
Call Sign: Latitude	(NAD83)	67 34	39 8 N
Longitude	(NAD83)		
Elevation AMSL	(ft/m)	22.97	7.00
Receive Frequency Range	(MHz)	5005 6405	
Transmit Frequency Range Range of Satellite Orbital Long.	(MHz)	5925-6425 114.00	
Range of Azimuths from North	(deg)	127.74	129.71
Antenna Centerline	(ft/m)		
Antenna Elevation Angles	(deg)	5.53	6.14
Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbT)	<i>1</i> 1 70	
	(deg)		
	. 5.		
Antennas Transmit: GENERAL	DYNAMICS 124	1 (2.4M)	
Max Transmitter Power	(dbW/4KHz)		-18.45
Max Transmitter Power Max EIRP Main Beam	(dbW/4KHz)		23.25
Modulation / Emission Designator		5M60G7W	
Coordination Parameters		Transmit	
May Creater Cinala Distance	(lem)	172 74	
Max Greater Circle Distances Max Rain Scatter Distances			
Max Interference Power Long Term			
Max Interference Power Short Term		-126.80	
Rain Zone / Radio Zone		3	А

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File: N2003814

TECHNICAL CHARACTERIST		-	H STATION
± ±	Alaska Commu Red Dog Port		ternet, LLC
Latitude	(NAD83)	67 34	
Longitude	(NAD83)	164 3	27.7 W
Elevation AMSL	(ft/m)	22.97	7.00
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	114.00	116.00
Range of Azimuths from North	(deg)	127.74	129.71
Antenna Centerline	(ft/m)	13.12	4.00
Antenna Elevation Angles	(deg)	5.53	6.14
Equipment Parameters		Receive	
Antenna Gain, Main Beam	, ,	38.00	
15 DB Half Beamwidth	(deg)	4.90	
Antennas Receive: GENERAL	DYNAMICS 12	41 (2.4M)	
Max Transmitter Power Max EIRP Main Beam Modulation / Emission Designator			
Coordination Parameters		Receive	
Max Greater Circle Distances Max Rain Scatter Distances Max Interference Power Long Term Max Interference Power Short Ter Rain Zone / Radio Zone			А

ANALYSIS OF NON-IONIZING RADIATION for Alaska Communications Internet LLC

Site: Red Dog Port State: AK

Latitude: 67 34 39.8 Longitude: 164 3 27.7 (NAD83) 03-18-2020

The Office of Science and Technology Bulletin, No. 65, October 1985 and revised August 1997, specifies that the maximum level of non-ionizing radiation that a person may be exposed to over a six minute period is an average power density equal to $5~\mathrm{mW/cm}^{**2}$ (five milliwatts per centimeter squared) for a controlled environment. For an uncontrolled environment, the maximum level of non-ionizing radiation that a person may be exposed to over a thirty minute period is an average power density equal to 1 mW/cm**2 (one milliwatt per centimeter squared). It is the purpose of this report to determine the maximum power flux densities of the earth station in the far zone, near zone, transition zone, at the main reflector surface, and between the antenna edge and the ground.

Parameters which were used in the calculations: ______

Antenna Diameter,

(D) = 2.4000 m

Antenna Surface Area (Sa) = $pi(D^{**2})/4$ = 4.5239 m**2

Wavelength at 6.1750 GHz (lambda) = 0.0485 m

Transmit Power at Flange (P) = 20.0000 Watts

Antenna Gain at Earth Site (GES) = 41.7000 dBi = 14791.0839

Power Ratio:

AntiLog(GES/10)

рi

= 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = (n)(D**2) = 71.2577 m
$$------$$
 lambda

Far Zone Power Density (Rf) = (GES)(P) =
$$4.6361 \text{ W/m**2}$$

------ $4*\text{pi*}(\text{Df**2})$ = 0.4636 mW/cm**2

2. NEAR ZONE CALCULATIONS

Power Flux Density is considered to be at a maximum value throughout the entire length of this Zone. The Zone is contained within a cylindrical volume which has the same diameter as the antenna. Beyond the Near Zone, the Power Flux Density will decrease with distance from the Antenna.

Distance to the Near Zone (Dn) =
$$D^{**2}$$
 = 29.6907 m $4*lambda$
Near Zone Power Density (Rn) = $16.0(n)P$ = 10.6103 W/m**2 $pi(D^{**2})$

= 1.0610 mW/cm**2

3. TRANSITION ZONE CALCULATIONS

The Power Density begins to decrease with distance in the Transition Zone. While the Power Density decreases inversely with distance in the Transition Zone, the Power Density decreases inversely with the square of the distance in the Far Zone. Since the maximum Power Density in the Transition Zone will not exceed the Near Zone values, it is not calculated.

4. MAIN REFLECTOR ZONE

Main Reflector Power Density = 2(P) = 8.8419 W/m**2

----Sa

= 0.8842 mW/cm**2

5. ZONE BETWEEN THE MAIN REFLECTOR AND THE GROUND

Applying uniform illumination of the Main Reflector Surface:

Main to Ground Power Density = P = 4.4210 W/m**2

----Sa

= 0.4421 mW/cm**2

CALCULATED SAFETY MARGINS SUMMARY AND EVALUATION

Controlled Safety Margin = 5.0 - Calculated Zone Value (mW/cm**2)

	Zones	Safety Margins (mW/cm**2)	Conclusions
1.	Far Zone	4.5364	Complies with ANSI
2.	Near Zone	3.9390	Complies with ANSI
3.	Transition Zone	Rf < Rt < Rn	Complies with ANSI
4.	Main Reflector Surface	4.1158	Complies with ANSI
5.	Main Reflector to Ground	4.5579	Complies with ANSI

Uncontrolled Safety Margin = 1.0 - Calculated Zone Value (mW/cm**2)

	Zones	Safety Margins (mW/cm**2)	Conclusions
1.	Far Zone	0.5364	Complies with ANSI
2.	Near Zone	-0.0610	POTENTIALLY HAZARDOUS
3.	Transition Zone	Rf < Rt < Rn	Complies with ANSI
4.	Main Reflector Surface	0.1158	Complies with ANSI
5.	Main Reflector to Ground	0.5579	Complies with ANSI

6. EVALUATION

- A. Controlled Environment
- B. Uncontrolled Environment

The NEAR ZONE does not comply with the ANSI standards! The system will be FENCED so that no one can enter the affected Zone while the system is in use. Additionally, the system will be shut down for servicing.

Approved by OMB 3060-0678

Date & Time Filed: File Number: ---Callsign/Satellite ID:

A	P	P	T	J	\mathbf{C}	A	T	T	O	N	IJ	F(N	R	F	ľΑ	I	?′	Γ	H	S	${f T}$	A	Т	T	V	A	I	ľ	Ŧ	10	1	R	T	7	A	T	T	O	N	ľč	;
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FCC 312 MAIN FORM FOR OFFICIAL USE ONLY

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:

Draft Form to Support 60-Day STA (Red Dog Port)

1-8. Legal Name of Applicant

Name: Alaska Communications Internet, LLC Phone Number: 907-297-3000

DBA Name: 907-297-3153

Street: 600 Telephone Avenue E-Mail: Lisa.Phillips@acsalaska.com

MS #60

City: Anchorage State: AK

Country: USA Zipcode: 90503 -

Attention: Ms. Lisa Phillips

9-16. Name of Contact Representative

Name: Richard Cameron Phone Number: 2022304962

Company: LMI Advisors Fax Number:

Street: 2550 M Street NW E-Mail: rcameron@lmiadvisors.com

Suite 343

City: Washington State: DC

Country: USA Zipcode: 20037Attention: Richard Cameron Relationship: Other

CLASSIFICATION OF FILING

17. Choose the button next to the	b
classification that applies to this filing	b1. Application for License of New Station
for both questions a. and b. Choose only one for 17a and only one for 17b.	b2. Application for Registration of New Domestic Receive-Only Station
one for 17a and only one for 17b.	(N/A) b3. Amendment to a Pending Application
9	(N/A) b4. Modification of License or Registration
	(N/A) b5. Assignment of License or Registration
a1. Earth Station	(N/A) b6. Transfer of Control of License or Registration
(N/A) a2. Space Station	(N/A) b7. Notification of Minor Modification
	(N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
	(N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United
	States
	• b10. Other (Please specify)
	b11. Application for Earth Station to Access a Non-U.S.satellite Not Currently Authorized
	to Provide the Proposed Service in the Proposed Frequencies in the United States.
17c. Is a fee submitted with this application	on?
If Yes, complete and attach FCC Form	n 159.

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

29. Is the applicant a foreign government or the representative of any foreign government?	○ Yes • No
30. Is the applicant an alien or the representative of an alien?	○ Yes ○ No ● N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	○ Yes ○ No ● N/A
32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	○ Yes ○ No ● N/A
33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	Yes No No N/A
34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.	1
BASIC QUALIFICATIONS	
35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.	Yes No
36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explination of circumstances.	Yes No
37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explination of circumstances.	Yes No
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangemen or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances	
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhinit, an explanation of the circumstances.	Yes No
40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.	
41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.	• Yes O No
42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.	• Yes O No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be has coordinated or is in the process of coordinating the space station? Mexico	issued, what administration
43. Description. (Summarize the nature of the application and the services to be provided). Draft Form	
43a. Geographic Service Rule Certification By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.	• A
	\bigcirc B

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic
coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.

) **(**

CERTIFICATION

of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordan
with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrur
aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out i
full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application
and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.
44. Applicant is a (an): (Choose the button next to applicable response.)

	☐ Individual	
	Unincorporated Association	
	Partnership	
	Corporation	
	Governmental Entity	
	• Other (please specify)	
	LLC	
Ī	45 M CD C: :	IC T'A CD C' '
		46. Title of Person Signing
I	Rick Benken	VP

L	l'		
Ī	47. Please supply any need attachments.		
	Attachment 1:	Attachment 2:	Attachment 3:

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 - Schedule B:(Technical and Operational Description)

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<u></u>				
Location of Earth Station Site	e			
E1: Site Identifier:	Red Dog Port	E5. Call Sign:		
E2: Contact Name	Greg Tooke	E6. Phone Number:	(907) 550-8364	
E3. Street:	Third Ave	E7. City:	Kotzebue	
		E8. County:		
E4. State	AK	E9. Zip Code	99752	
E10. Area of Operation:		Kotzebue, AK		
E11. Latitude:	67 ° 34 ' 39.8 " N			
E12. Longitude:	164 ° 3 ' 27.7 " W			
E13. Lat/Lon Coordinates ar	e:	ONAD-27	• NAD-83	○N/A
E14. Site Elevation (AMSL)	:	7.0 meters		

indps://neensing.ree.gov/folswee/folpage/reteinfolm/na_app_nam=112502ecfolm=1015_101.indine	
E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two-degree spacing policy.	Yes No N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	Yes No No N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	Yes No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	• Yes ONo
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	Yes No
E20. FAA Notification - (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	○ Yes • No
POINTS OF COMMUNICATION	

l	Satellite Name: EUTELSAT115WB(S2938) EUTELSAT 115 WB 114.9 W.L. If you selected OTHER, please
	enter the following:
ı	

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: Red Dog Port	
E26. Common Name:	E27. Country:USA

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size	E41/42. Antenna GainTransmint and/or Recieve(dBi atGHz)
Red Dog Port	VSAT		General Dynamics	1241	2.4	37.6 dBi at 3.740
						41.6 dBi at 5.9650

E28. Antenna Id	Minor/Major(meters)	E35. Above Ground Level (meters)	Above Sea Level	E37. Building Height Above Ground Level (meters)		E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers (dBW)
VSAT	0.0/0.0	7.0	0.0	0.0	20.0	0.0	54.7

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands(MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V,L,R)	l 		E49. Maximum ERIP Density per Carrier(dBW/4kHz)		
VSAT	3700 4200	R	Horizontal and Vertical	72M0G7W	0.0	0.0		
E50. Mod	E50. Modulation and Services Digital							
VSAT	5925 6425	T	Horizontal and Vertical	5M60G7W	54.7	23.25		

E50. Modulation and Services Digital

FREQUENCY COORDINATION

E28. Antenna Id	I Irhit I who	E52/53. Frequency Limits(MHz)	II I	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	Angle Western	E60. Maximum EIRP Density toward the Horizon(dBW/4kHz)
VSAT	Geostationary	3700 4200	114.0/ 116.0	127.74	5.53	129.71	6.14	0.0
	Geostationary	5925 6425	114.0/ 116.0	127.74	5.53	129.71	6.14	-50.23

REMOTE CONTROL POINT LOCATION REMOTE CONTROL POINT LOCATION

E61. Call Sign	E65. Phone Number		
NOTE: Please enter the callsign of the controlling station, no application is being filed.	ot the callsign for which this		
E62. Street Address			
E63. City	E67. County	E64/68. State/Country	E66. Zip Code

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