Alaska Communications Internet LLC
VSAT Blanket License Modification Application

Technical Appendix

I. Frequency Coordination Reports

II. Radiation Hazard Analyses

I. Frequency Coordination Reports

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: D1925614 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:

KANA Larsen Bay, 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:

10/17/2019 Original PCN (Expedited response requested by 10/31/2019)
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:

AT&T MOBILITY SPECTRUM LLC
COMSEARCH INC
GCI COMMUNICATION CORP.
KODIAK MICROWAVE SYSTEM, LLC
NEW CINGULAR WIRELESS PCS, LLC

Respectfully Submitted,

Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: D1925614

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Larsen Bay, AK	
Call Sign:			
Latitude	(NAD83)	57 32 11.3 N	
Longitude	(NAD83)	153 58 44.8 W	
Elevation AMSL	(ft/m)	59.06	18.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6050.625/6106.625-6109.925/6165.925-6302.665/6358.665-6361.965/6417.965-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	135.18	136.20
Antenna Centerline	(ft/m)	52.49	16.00
Antenna Elevation Angles	(deg)	15.94	16.33

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	42.00	
15 DB Half Beamwidth	(deg)	4.90	
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)		
Max Transmitter Power	(dbW/4KHz)		-18.13
Max EIRP Main Beam	(dbW/4KHz)		23.87
Modulation / Emission Designator	DIGITAL	2M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	148.93	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

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Licensee: Alaska Communications Internet, LLC

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Plano, Texas 75075
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File: R1925614

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Larsen Bay, AK	
Call Sign:			
Latitude	(NAD83)	57 32 11.3 N	
Longitude	(NAD83)	153 58 44.8 W	
Elevation AMSL	(ft/m)	59.06	18.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6050.625/6106.625-6109.925/6165.925-6302.665/6358.665-6361.965/6417.965-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	135.18	136.20
Antenna Centerline	(ft/m)	52.49	16.00
Antenna Elevation Angles	(deg)	15.94	16.33

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	42.00	
15 DB Half Beamwidth	(deg)	4.90	
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)		
Max Transmitter Power	(dbW/4KHz)		-21.26
Max EIRP Main Beam	(dbW/4KHz)		20.74
Modulation / Emission Designator	DIGITAL	5M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	139.98	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: S1925614 3.70 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:

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

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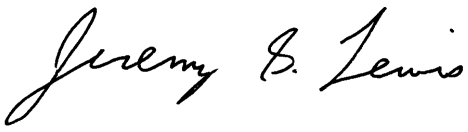
There were no unresolved interference objections.

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

COMSEARCH INC

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: S1925614

TECHNICAL CHARACTERISTICS OF RECEIVE ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Larsen Bay, AK	
Call Sign:			
Latitude	(NAD83)	57 32 11.3 N	
Longitude	(NAD83)	153 58 44.8 W	
Elevation AMSL	(ft/m)	59.06	18.00
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	135.18	136.20
Antenna Centerline	(ft/m)	52.49	16.00
Antenna Elevation Angles	(deg)	15.94	16.33

Equipment Parameters		Receive	
Antenna Gain, Main Beam	(dbI)	38.00	
15 DB Half Beamwidth	(deg)	4.90	
Antennas	Receive: GENERAL DYNAMICS 1241 (2.4M)		
Max Transmitter Power	(dbW/4KHz)		
Max EIRP Main Beam	(dbW/4KHz)		
Modulation / Emission Designator	DIGITAL	72M0G7W	

Coordination Parameters		Receive	
Max Greater Circle Distances	(km)	432.09	
Max Rain Scatter Distances	(km)	369.90	
Max Interference Power Long Term	(dbW)	-182.60	
Max Interference Power Short Term	(dbW)	-177.90	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: B1925614 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:

KANA Akhiok, 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:

10/17/2019 Original PCN (Expedited response requested by 10/31/2019)
There were no unresolved interference objections.

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COMSEARCH INC
KODIAK MICROWAVE SYSTEM, LLC

Respectfully Submitted,

Jeremy B. Lewis

Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: B1925614

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Akhiok, AK	
Call Sign:			
Latitude	(NAD83)	56 56 43.7 N	
Longitude	(NAD83)	154 10 27.0 W	
Elevation AMSL	(ft/m)	36.09	11.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6271.19/6301.19-6330.49/6360.49-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	134.79	135.81
Antenna Centerline	(ft/m)	29.53	9.00
Antenna Elevation Angles	(deg)	16.30	16.70

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	42.20	
15 DB Half Beamwidth	(deg)	2.00	
Antennas	Transmit: GENERAL DYNAMICS 2244 (2.4M)		
Max Transmitter Power	(dbW/4KHz)		-18.13
Max EIRP Main Beam	(dbW/4KHz)		24.07
Modulation / Emission Designator	DIGITAL	2M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	148.11	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: M1925614 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:

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COMSEARCH INC
KODIAK MICROWAVE SYSTEM, LLC

Respectfully Submitted,

Jeremy B. Lewis

Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: M1925614

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Akhiok, AK	
Call Sign:			
Latitude	(NAD83)	56 56 43.7 N	
Longitude	(NAD83)	154 10 27.0 W	
Elevation AMSL	(ft/m)	36.09	11.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6271.19/6301.19-6330.49/6360.49-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	134.79	135.81
Antenna Centerline	(ft/m)	29.53	9.00
Antenna Elevation Angles	(deg)	16.30	16.70

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	42.20	
15 DB Half Beamwidth	(deg)	2.00	
Antennas	Transmit: GENERAL DYNAMICS 2244 (2.4M)		
Max Transmitter Power	(dbW/4KHz)		-21.46
Max EIRP Main Beam	(dbW/4KHz)		20.74
Modulation / Emission Designator	DIGITAL	5M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	138.77	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: N1925614 3.70 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:

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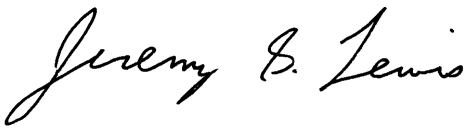
Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: N1925614

TECHNICAL CHARACTERISTICS OF RECEIVE ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Akhiok, AK	
Call Sign:			
Latitude	(NAD83)	56 56 43.7 N	
Longitude	(NAD83)	154 10 27.0 W	
Elevation AMSL	(ft/m)	36.09	11.00
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	134.79	135.81
Antenna Centerline	(ft/m)	29.53	9.00
Antenna Elevation Angles	(deg)	16.30	16.70

Equipment Parameters		Receive
Antenna Gain, Main Beam	(dbI)	38.20
15 DB Half Beamwidth	(deg)	2.40
Antennas	Receive: GENERAL DYNAMICS 2244 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	
Max EIRP Main Beam	(dbW/4KHz)	
Modulation / Emission Designator	DIGITAL	72M0G7W

Coordination Parameters		Receive	
Max Greater Circle Distances	(km)	429.86	
Max Rain Scatter Distances	(km)	369.33	
Max Interference Power Long Term	(dbW)	-182.60	
Max Interference Power Short Term	(dbW)	-177.90	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: T1925614 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:

KANA Old Harbor, AK

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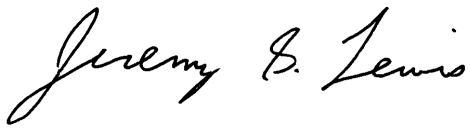
NEW CINGULAR WIRELESS PCS, LLC

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: T1925614

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Old Harbor, AK	
Call Sign:			
Latitude	(NAD83)	57 12 48.7 N	
Longitude	(NAD83)	153 17 0.7 W	
Elevation AMSL	(ft/m)	32.81	10.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6019.15/6049.15-6078.45/6108.45-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	135.78	136.81
Antenna Centerline	(ft/m)	26.25	8.00
Antenna Elevation Angles	(deg)	16.46	16.85

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	42.00	
15 DB Half Beamwidth	(deg)	4.90	
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)		
Max Transmitter Power	(dbW/4KHz)		-21.26
Max EIRP Main Beam	(dbW/4KHz)		20.74
Modulation / Emission Designator	DIGITAL	5M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	139.00	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: F1925614 5.93 GHz
Licensee: Alaska Communications Internet, LLC

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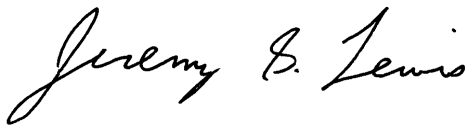
Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: F1925614

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Old Harbor, AK	
Call Sign:			
Latitude	(NAD83)	57 12 48.7 N	
Longitude	(NAD83)	153 17 0.7 W	
Elevation AMSL	(ft/m)	32.81	10.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6019.15/6049.15-6078.45/6108.45-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	135.78	136.81
Antenna Centerline	(ft/m)	26.25	8.00
Antenna Elevation Angles	(deg)	16.46	16.85

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	42.00	
15 DB Half Beamwidth	(deg)	4.90	
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)		
Max Transmitter Power	(dbW/4KHz)		-18.13
Max EIRP Main Beam	(dbW/4KHz)		23.87
Modulation / Emission Designator	DIGITAL	2M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	147.72	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: U1925614 3.70 GHz
Licensee: Alaska Communications Internet, LLC

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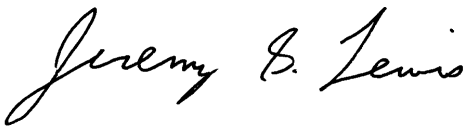

Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: U1925614

TECHNICAL CHARACTERISTICS OF RECEIVE ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Old Harbor, AK	
Call Sign:			
Latitude	(NAD83)	57 12 48.7 N	
Longitude	(NAD83)	153 17 0.7 W	
Elevation AMSL	(ft/m)	32.81	10.00
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	135.78	136.81
Antenna Centerline	(ft/m)	26.25	8.00
Antenna Elevation Angles	(deg)	16.46	16.85

Equipment Parameters		Receive
Antenna Gain, Main Beam	(dbI)	38.00
15 DB Half Beamwidth	(deg)	4.90
Antennas	Receive: GENERAL DYNAMICS 1241 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	
Max EIRP Main Beam	(dbW/4KHz)	
Modulation / Emission Designator	DIGITAL	72M0G7W

Coordination Parameters		Receive	
Max Greater Circle Distances	(km)	428.80	
Max Rain Scatter Distances	(km)	369.09	
Max Interference Power Long Term	(dbW)	-182.60	
Max Interference Power Short Term	(dbW)	-177.90	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: H1925614 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:

KANA Ouzinkie, AK

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

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KODIAK MICROWAVE SYSTEM, LLC
NEW CINGULAR WIRELESS PCS, LLC

Respectfully Submitted,

Jeremy Lewis
Systems Engineer

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

File: H1925614

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Ouzinkie, AK	
Call Sign:			
Latitude	(NAD83)	57 55 28.3 N	
Longitude	(NAD83)	152 29 58.3 W	
Elevation AMSL	(ft/m)	55.77	17.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	136.81	137.84
Antenna Centerline	(ft/m)	49.21	15.00
Antenna Elevation Angles	(deg)	16.22	16.60

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	42.00	
15 DB Half Beamwidth	(deg)	4.90	
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)		
Max Transmitter Power	(dbW/4KHz)		-18.13
Max EIRP Main Beam	(dbW/4KHz)		23.87
Modulation / Emission Designator	DIGITAL	2M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	148.07	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: V1925614 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:

KANA Ouzinkie, AK

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

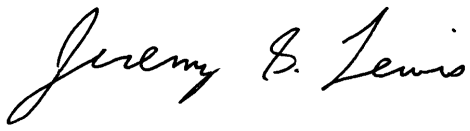
Coordination was performed with existing, proposed and prior coordinated carriers within coordination range on the following dates:

10/17/2019 Original PCN (Expedited response requested by 10/31/2019)
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:

AT&T MOBILITY SPECTRUM LLC
COMSEARCH INC
GCI COMMUNICATION CORP.
KODIAK MICROWAVE SYSTEM, LLC
NEW CINGULAR WIRELESS PCS, LLC

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: V1925614

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Ouzinkie, AK	
Call Sign:			
Latitude	(NAD83)	57 55 28.3 N	
Longitude	(NAD83)	152 29 58.3 W	
Elevation AMSL	(ft/m)	55.77	17.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	136.81	137.84
Antenna Centerline	(ft/m)	49.21	15.00
Antenna Elevation Angles	(deg)	16.22	16.60

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	42.00	
15 DB Half Beamwidth	(deg)	4.90	
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)		
Max Transmitter Power	(dbW/4KHz)		-21.26
Max EIRP Main Beam	(dbW/4KHz)		20.74
Modulation / Emission Designator	DIGITAL	5M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	139.28	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: W1925614 3.70 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:

KANA Ouzinkie, AK

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

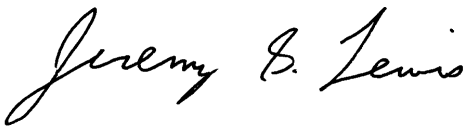
Coordination was performed with existing, proposed and prior coordinated carriers within coordination range on the following dates:

10/17/2019 Original PCN (Expedited response requested by 10/31/2019)
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

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: W1925614

TECHNICAL CHARACTERISTICS OF RECEIVE ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		KANA Ouzinkie, AK	
Call Sign:			
Latitude	(NAD83)	57 55 28.3 N	
Longitude	(NAD83)	152 29 58.3 W	
Elevation AMSL	(ft/m)	55.77	17.00
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	136.81	137.84
Antenna Centerline	(ft/m)	49.21	15.00
Antenna Elevation Angles	(deg)	16.22	16.60

Equipment Parameters		Receive
Antenna Gain, Main Beam	(dbI)	38.00
15 DB Half Beamwidth	(deg)	4.90
Antennas	Receive: GENERAL DYNAMICS 1241 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	
Max EIRP Main Beam	(dbW/4KHz)	
Modulation / Emission Designator	DIGITAL	72M0G7W

Coordination Parameters		Receive	
Max Greater Circle Distances	(km)	429.74	
Max Rain Scatter Distances	(km)	369.46	
Max Interference Power Long Term	(dbW)	-182.60	
Max Interference Power Short Term	(dbW)	-177.90	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: C1917809 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:

Kobuk, AK

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

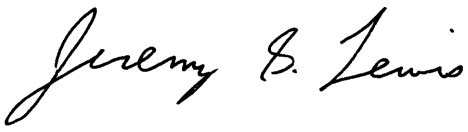
Coordination was performed with existing, proposed and prior coordinated carriers within coordination range on the following dates:

07/17/2019 Original PCN
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

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: C1917809

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Kobuk, AK	
Call Sign:			
Latitude	(NAD83)	66 54 27.3 N	
Longitude	(NAD83)	156 53 1.0 W	
Elevation AMSL	(ft/m)	145.00	44.20
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	134.73	135.73
Antenna Centerline	(ft/m)	6.56	2.00
Antenna Elevation Angles	(deg)	8.11	8.39

Equipment Parameters		Transmit
Antenna Gain, Main Beam	(dbI)	42.00
15 DB Half Beamwidth	(deg)	3.10
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	-18.76
Max EIRP Main Beam	(dbW/4KHz)	23.24
Modulation / Emission Designator	DIGITAL	5M60G7W

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	167.27	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-130.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: N1917809 3.70 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:

Kobuk, AK

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

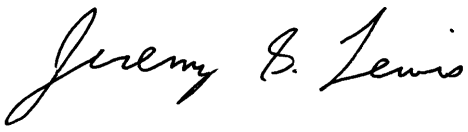
Coordination was performed with existing, proposed and prior coordinated carriers within coordination range on the following dates:

07/17/2019 Original PCN
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

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: N1917809

TECHNICAL CHARACTERISTICS OF RECEIVE ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Kobuk, AK	
Call Sign:			
Latitude	(NAD83)	66 54 27.3 N	
Longitude	(NAD83)	156 53 1.0 W	
Elevation AMSL	(ft/m)	145.00	44.20
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	134.73	135.73
Antenna Centerline	(ft/m)	5.91	1.80
Antenna Elevation Angles	(deg)	8.11	8.39

Equipment Parameters		Receive
Antenna Gain, Main Beam	(dbI)	38.00
15 DB Half Beamwidth	(deg)	4.90
Antennas	Receive: GENERAL DYNAMICS 1241 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	
Max EIRP Main Beam	(dbW/4KHz)	
Modulation / Emission Designator	DIGITAL	72M0G7W

Coordination Parameters		Receive	
Max Greater Circle Distances	(km)	487.87	
Max Rain Scatter Distances	(km)	394.59	
Max Interference Power Long Term	(dbW)	-158.60	
Max Interference Power Short Term	(dbW)	-149.90	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: M1922608 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:

Yakutat, AK

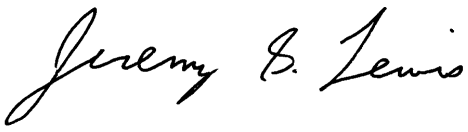
The results of the study indicate that no unacceptable interference will result with existing, proposed or prior coordinated radio facilities.

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

10/10/2019 Original PCN (Expedited response requested by 10/24/2019)
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:

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: M1922608

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Yakutat, AK	
Call Sign:			
Latitude	(NAD83)	59 32 23.2 N	
Longitude	(NAD83)	139 44 12.9 W	
Elevation AMSL	(ft/m)	72.18	22.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6425	
Range of Satellite Orbital Long.	(deg W)	46.00	115.00
Range of Azimuths from North	(deg)	93.22	151.88
Antenna Centerline	(ft/m)	5.91	1.80
Antenna Elevation Angles	(deg)	-10.43	19.22

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	46.50	
15 DB Half Beamwidth	(deg)	2.00	
Antennas	Transmit: PRODELIN 1385 (3.8M)		
Max Transmitter Power	(dbW/4KHz)		-12.40
Max EIRP Main Beam	(dbW/4KHz)		34.10
Modulation / Emission Designator	DIGITAL	5M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	621.14	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: N1922608 3.70 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:

Yakutat, AK

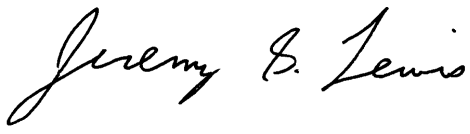
The results of the study indicate that no unacceptable interference will result with existing, proposed or prior coordinated radio facilities.

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

10/10/2019 Original PCN (Expedited response requested by 10/24/2019)
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:

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: N1922608

TECHNICAL CHARACTERISTICS OF RECEIVE ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Yakutat, AK	
Call Sign:			
Latitude	(NAD83)	59 32 23.2 N	
Longitude	(NAD83)	139 44 12.9 W	
Elevation AMSL	(ft/m)	72.18	22.00
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	114.00	115.00
Range of Azimuths from North	(deg)	150.78	151.88
Antenna Centerline	(ft/m)	5.91	1.80
Antenna Elevation Angles	(deg)	18.96	19.22

Equipment Parameters		Receive
Antenna Gain, Main Beam	(dbI)	42.00
15 DB Half Beamwidth	(deg)	2.40
Antennas	Receive: PRODELIN 1386 (3.8 M)	
Max Transmitter Power	(dbW/4KHz)	
Max EIRP Main Beam	(dbW/4KHz)	
Modulation / Emission Designator	DIGITAL	72M0G7W

Coordination Parameters		Receive	
Max Greater Circle Distances	(km)	415.97	
Max Rain Scatter Distances	(km)	365.76	
Max Interference Power Long Term	(dbW)	-158.60	
Max Interference Power Short Term	(dbW)	-153.90	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: M1929825 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:

8 Mile, 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:

11/12/2019 Original PCN (Expedited response requested by 11/26/2019)
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:

BRISTOL BAY CELLULAR PARTNERSHIP
COMSEARCH INC
MICRONET COMMUNICATIONS INC
NUSHAGAK ELECTRIC & TELEPHONE COOP
RADIO DYNAMICS
UNITED UTILITIES INC

Respectfully Submitted,

Jeremy B. Lewis

Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: M1929825

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		8 Mile, AK	
Call Sign:			
Latitude	(NAD83)	58 43 41.0 N	
Longitude	(NAD83)	156 48 59.2 W	
Elevation AMSL	(ft/m)	131.23	40.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6425	
Range of Satellite Orbital Long.	(deg W)	46.00	115.00
Range of Azimuths from North	(deg)	108.00	133.69
Antenna Centerline	(ft/m)	6.56	2.00
Antenna Elevation Angles	(deg)	-18.84	14.35

Equipment Parameters		Transmit
Antenna Gain, Main Beam	(dbI)	42.00
15 DB Half Beamwidth	(deg)	2.00
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	-18.45
Max EIRP Main Beam	(dbW/4KHz)	23.55
Modulation / Emission Designator	DIGITAL	5M60G7W

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	365.70	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: N1929825 3.70 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:

8 Mile, 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:

11/12/2019 Original PCN (Expedited response requested by 11/26/2019)
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

Respectfully Submitted,

Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: N1929825

TECHNICAL CHARACTERISTICS OF RECEIVE ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		8 Mile, AK	
Call Sign:			
Latitude	(NAD83)	58 43 41.0 N	
Longitude	(NAD83)	156 48 59.2 W	
Elevation AMSL	(ft/m)	131.23	40.00
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	46.00	115.00
Range of Azimuths from North	(deg)	108.00	133.69
Antenna Centerline	(ft/m)	6.56	2.00
Antenna Elevation Angles	(deg)	-18.84	14.35

Equipment Parameters		Receive
Antenna Gain, Main Beam	(dbI)	38.00
15 DB Half Beamwidth	(deg)	4.90
Antennas	Receive: GENERAL DYNAMICS 1241 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	
Max EIRP Main Beam	(dbW/4KHz)	
Modulation / Emission Designator	DIGITAL	72M0G7W

Coordination Parameters		Receive	
Max Greater Circle Distances	(km)	967.52	
Max Rain Scatter Distances	(km)	345.34	
Max Interference Power Long Term	(dbW)	-158.60	
Max Interference Power Short Term	(dbW)	-153.90	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: M1934616 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:

Naknek Silverbay, 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:

12/23/2019 Original PCN (Expedited response requested by 01/06/2020)
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:

BRISTOL BAY CELLULAR PARTNERSHIP
COMSEARCH INC
MICRONET COMMUNICATIONS INC
NUSHAGAK ELECTRIC & TELEPHONE COOP
RADIO DYNAMICS
UNITED UTILITIES, INC.

Respectfully Submitted,

Jeremy B. Lewis

Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: M1934616

TECHNICAL CHARACTERISTICS OF TRANSMIT RECEIVE EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Naknek Silverbay, AK	
Call Sign:			
Latitude	(NAD83)	58 44 41.4 N	
Longitude	(NAD83)	156 57 14.4 W	
Elevation AMSL	(ft/m)	78.74	24.00
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)	5925-6425	
Range of Satellite Orbital Long.	(deg W)	114.00	116.00
Range of Azimuths from North	(deg)	132.56	134.57
Antenna Centerline	(ft/m)	16.40	5.00
Antenna Elevation Angles	(deg)	13.89	14.67

Equipment Parameters		Receive	Transmit
Antenna Gain, Main Beam	(dbI)	38.00	41.70
15 DB Half Beamwidth	(deg)	4.90	2.00

Antennas Receive: GENERAL DYNAMICS 1241 (2.4M)
Transmit: GENERAL DYNAMICS 1241 (2.4M)

Max Transmitter Power	(dbW/4KHz)		-18.45
Max EIRP Main Beam	(dbW/4KHz)		23.25
Modulation / Emission Designator	DIGITAL	5M60G7W	

Coordination Parameters		Receive	Transmit
Max Greater Circle Distances	(km)	444.36	152.35
Max Rain Scatter Distances	(km)	373.71	100.00
Max Interference Power Long Term	(dbW)	-158.60	-154.80
Max Interference Power Short Term	(dbW)	-153.90	-126.80
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: M2023912 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.

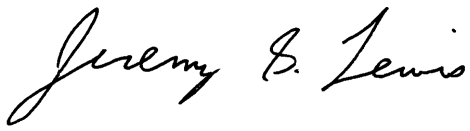
Coordination was performed with existing, proposed and prior coordinated carriers within coordination range on the following dates:

09/03/2020 Original PCN (Expedited response requested by 09/17/2020)
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

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: M2023912

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Red Dog Port, AK	
Call Sign:			
Latitude	(NAD83)	67 34 39.8 N	
Longitude	(NAD83)	164 3 27.7 W	
Elevation AMSL	(ft/m)	22.97	7.00
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6425	
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		Transmit
Antenna Gain, Main Beam	(dbI)	41.70
15 DB Half Beamwidth	(deg)	2.00
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	-17.14
Max EIRP Main Beam	(dbW/4KHz)	24.56
Modulation / Emission Designator	DIGITAL	12M4G7W

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	178.16	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: M2024008 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:

Shungnak, AK

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

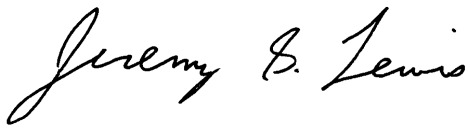
Coordination was performed with existing, proposed and prior coordinated carriers within coordination range on the following dates:

09/14/2020 Original PCN (Expedited response requested by 09/28/2020)
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
DRS GLOBAL ENTERPRISE SOLUTIONS, INC.
UNICOM, INC
WIRELESS APPLICATIONS CORP

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: M2024008

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Shungnak, AK	
Call Sign:			
Latitude	(NAD83)	66 53 16.8 N	
Longitude	(NAD83)	157 8 18.9 W	
Elevation AMSL	(ft/m)	183.00	55.78
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6425	
Range of Satellite Orbital Long.	(deg W)	95.00	191.00
Range of Azimuths from North	(deg)	115.93	216.11
Antenna Centerline	(ft/m)	6.56	2.00
Antenna Elevation Angles	(deg)	1.89	10.49

Equipment Parameters		Transmit
Antenna Gain, Main Beam	(dbI)	41.70
15 DB Half Beamwidth	(deg)	3.10
Antennas	Transmit: GENERAL DYNAMICS 1241 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	-18.46
Max EIRP Main Beam	(dbW/4KHz)	23.24
Modulation / Emission Designator	DIGITAL	5M60G7W

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	215.80	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: N2024008 3.70 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:

Shungnak, AK

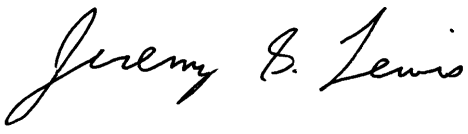
The results of the study indicate that no unacceptable interference will result with existing, proposed or prior coordinated radio facilities.

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

09/14/2020 Original PCN (Expedited response requested by 09/28/2020)
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:

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: N2024008

TECHNICAL CHARACTERISTICS OF RECEIVE ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Shungnak, AK	
Call Sign:			
Latitude	(NAD83)	66 53 16.8 N	
Longitude	(NAD83)	157 8 18.9 W	
Elevation AMSL	(ft/m)	183.00	55.78
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	95.00	191.00
Range of Azimuths from North	(deg)	115.93	216.11
Antenna Centerline	(ft/m)	6.56	2.00
Antenna Elevation Angles	(deg)	1.89	10.49

Equipment Parameters		Receive
Antenna Gain, Main Beam	(dbI)	38.00
15 DB Half Beamwidth	(deg)	4.90
Antennas	Receive: GENERAL DYNAMICS 1241 (2.4M)	
Max Transmitter Power	(dbW/4KHz)	
Max EIRP Main Beam	(dbW/4KHz)	
Modulation / Emission Designator	DIGITAL	72M0G7W

Coordination Parameters		Receive	
Max Greater Circle Distances	(km)	631.33	
Max Rain Scatter Distances	(km)	551.15	
Max Interference Power Long Term	(dbW)	-158.60	
Max Interference Power Short Term	(dbW)	-153.90	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: M2030407 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:

Hooper Bay, AK

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

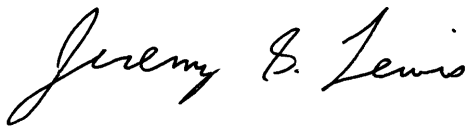
Coordination was performed with existing, proposed and prior coordinated carriers within coordination range on the following dates:

10/30/2020 Original PCN (Expedited response requested by 11/13/2020)
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
UNITED2, LLC
WIRELESS APPLICATIONS CORP

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: M2030407

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Hooper Bay, AK	
Call Sign:			
Latitude	(NAD83)	61 31 40.0 N	
Longitude	(NAD83)	166 6 22.5 W	
Elevation AMSL	(ft/m)	26.00	7.92
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6137.75/6167.75-6389.79/6419.79-6425	
Range of Satellite Orbital Long.	(deg W)	95.00	191.00
Range of Azimuths from North	(deg)	106.74	207.83
Antenna Centerline	(ft/m)	16.40	5.00
Antenna Elevation Angles	(deg)	0.20	17.34

Equipment Parameters		Transmit
Antenna Gain, Main Beam	(dbI)	46.20
15 DB Half Beamwidth	(deg)	0.90
Antennas	Transmit: GENERAL DYNAMICS 1385 (3.8M)	
Max Transmitter Power	(dbW/4KHz)	-18.89
Max EIRP Main Beam	(dbW/4KHz)	27.31
Modulation / Emission Designator	ANALOG	12M4G7W

Coordination Parameters		Transmit
Max Greater Circle Distances	(km)	226.48
Max Rain Scatter Distances	(km)	100.00
Max Interference Power Long Term	(dbW)	-154.80
Max Interference Power Short Term	(dbW)	-126.80
Rain Zone / Radio Zone		3 A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: N2030407 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:

Hooper Bay, 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:

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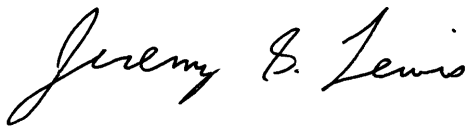
COMSEARCH INC
UNITED2, LLC
WIRELESS APPLICATIONS CORP

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: N2030407

TECHNICAL CHARACTERISTICS OF TRANSMIT ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Hooper Bay, AK	
Call Sign:			
Latitude	(NAD83)	61 31 40.0 N	
Longitude	(NAD83)	166 6 22.5 W	
Elevation AMSL	(ft/m)	26.00	7.92
Receive Frequency Range	(MHz)		
Transmit Frequency Range	(MHz)	5925-6137.75/6167.75-6389.79/6419.79-6425	
Range of Satellite Orbital Long.	(deg W)	95.00	191.00
Range of Azimuths from North	(deg)	106.74	207.83
Antenna Centerline	(ft/m)	16.40	5.00
Antenna Elevation Angles	(deg)	0.20	17.34

Equipment Parameters		Transmit	
Antenna Gain, Main Beam	(dbI)	46.20	
15 DB Half Beamwidth	(deg)	0.90	
Antennas	Transmit: GENERAL DYNAMICS 1385 (3.8M)		
Max Transmitter Power	(dbW/4KHz)		-15.44
Max EIRP Main Beam	(dbW/4KHz)		30.76
Modulation / Emission Designator	ANALOG	5M60G7W	

Coordination Parameters		Transmit	
Max Greater Circle Distances	(km)	244.69	
Max Rain Scatter Distances	(km)	100.00	
Max Interference Power Long Term	(dbW)	-154.80	
Max Interference Power Short Term	(dbW)	-126.80	
Rain Zone / Radio Zone		3	A

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

SUPPLEMENTAL SHOWING PART 101.103(D)

File Number: P2030407 3.70 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:

Hooper Bay, AK

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

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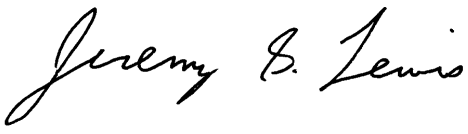
COMSEARCH INC

Respectfully Submitted,



Jeremy Lewis
Systems Engineer

Attached: 1 data sheet

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

File: P2030407

TECHNICAL CHARACTERISTICS OF RECEIVE ONLY EARTH STATION

Company:		Alaska Communications Internet, LLC	
Site Name, State:		Hooper Bay, AK	
Call Sign:			
Latitude	(NAD83)	61 31 40.0 N	
Longitude	(NAD83)	166 6 22.5 W	
Elevation AMSL	(ft/m)	26.00	7.92
Receive Frequency Range	(MHz)	3700-4200	
Transmit Frequency Range	(MHz)		
Range of Satellite Orbital Long.	(deg W)	95.00	191.00
Range of Azimuths from North	(deg)	106.74	207.83
Antenna Centerline	(ft/m)	16.40	5.00
Antenna Elevation Angles	(deg)	0.20	17.34

Equipment Parameters		Receive
Antenna Gain, Main Beam	(dbI)	41.80
15 DB Half Beamwidth	(deg)	1.40
Antennas	Receive: GENERAL DYNAMICS 1385 (3.8 M)	
Max Transmitter Power	(dbW/4KHz)	
Max EIRP Main Beam	(dbW/4KHz)	
Modulation / Emission Designator	ANALOG	72M0G7W

Coordination Parameters		Receive	
Max Greater Circle Distances	(km)	609.53	
Max Rain Scatter Distances	(km)	341.64	
Max Interference Power Long Term	(dbW)	-158.60	
Max Interference Power Short Term	(dbW)	-153.90	
Rain Zone / Radio Zone		3	A

Approved by OMB
3060-0678

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

APPLICATION FOR EARTH STATION AUTHORIZATIONS FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	FCC Use Only

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
Draft Form to Support 60-Day STA (Shungnak)

1-8. Legal Name of Applicant

Name:	Alaska Communications Internet, LLC	Phone Number:	907-297-3000
DBA Name:		Fax Number:	907-297-3153
Street:	600 Telephone Avenue MS #60	E-Mail:	Lisa.Phillips@acsalaska.com
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 Suite 343	E-Mail:	rcameron@lmiadvisors.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20037-
Attention:	Richard Cameron	Relationship:	Other

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

a.
- (●) a1. Earth Station
- (N/A) a2. Space Station

b.
- ( ) b1. Application for License of New Station
- ( ) b2. Application for Registration of New Domestic Receive-Only Station
- (N/A) b3. Amendment to a Pending Application
- (N/A) b4. Modification of License or Registration
- (N/A) b5. Assignment of License or Registration
- (N/A) b6. Transfer of Control of License or Registration
- (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?
- ( ) If Yes, complete and attach FCC Form 159.

If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).

○ Governmental Entity ○ Noncommercial educational licensee

◉ Other(please explain): Draft Form

17d.
Fee Classification

18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pending application enter:	
(a) Call sign of station:	(a) Date pending application was filed:	(b) File number of pending application:
Not Applicable	Not Applicable	Not Applicable

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

☑ a. Fixed Satellite
☐ b. Mobile Satellite
☐ c. Radiodetermination Satellite
☐ d. Earth Exploration Satellite
☐ e. Direct to Home Fixed Satellite
☐ f. Digital Audio Radio Service
☐ g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

○ Common Carrier ◉ Non-Common Carrier

22. If earth station applicant, check all that apply.

☐ Using U.S. licensed satellites
☑ Using Non-U.S. licensed satellites

23. If applicant is providng INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

○ Connected to a Public Switched Network ○ Not connected to a Public Switched Network ◉ N/A

24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s).

☑ a. C-Band (4/6 GHz) ☐ b. Ku-Band (12/14 GHz)
☐ c.Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: Frequency Upper:

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

◉ a. Fixed Earth Station
○ b. Temporary-Fixed Earth Station
○ c. 12/14 GHz VSAT Network
○ d. Mobile Earth Station
(N/A) e. Geostationary Space Station
(N/A) f. Non-Geostationary Space Station
○ g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY: Choose only one.

◉ Transmit/Receive ○ Transmit-Only ○ Receive-Only ○ N/A

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

Not Applicable

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application.A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.

○ **Yes** ◉ **No**

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 ◉ 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.	

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 attemptiing unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition?If Yes, attach as an exhibit, an explanation of circumstances	○ Yes ◉ No
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's 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 ○ 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 ○ No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?Mexico	
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

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.	○ **B**
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.	○ **C**

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum 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 in 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

45. Name of Person Signing	46. Title of Person Signing
Rick Benken	VP

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)

FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	Shungnak	E5. Call Sign:	
E2: Contact Name	Greg Tooke	E6. Phone Number:	(907) 550-8364
E3. Street:	Wendy St	E7. City:	Shungnak
		E8. County:	
E4. State	AK	E9. Zip Code	99773
E10. Area of Operation:		Shungnak, AK	
E11. Latitude:	66 ° 53 ' 16.8 " N		
E12. Longitude:	157 ° 8 ' 18.9 " W		
E13. Lat/Lon Coordinates are:		○ NAD-27	◉ NAD-83 ○ N/A
E14. Site Elevation (AMSL):			

55.78 meters

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 asa 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 ◉ 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 ○ No
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

Satellite Name:EUTELSAT115WB(S2938) | EUTELSAT 115 WB | 114.9 W.L. If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: Shungnak	
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 at _____GHz)
Shungnak	VSAT	1	General Dynamics	1241	2.4	37.6 dBi at 3.740
						41.7 dBi at 5.9650

E28. Antenna Id	E33/34. Diameter Minor/Major(meters)	E35. Above Ground Level (meters)	E36. Above Sea Level (meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers (dBW)
VSAT	0.0/0.0	3.0	55.78	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)	E47. Emission Designator	E48. Maximum EIRP per Carrier(dBW)	E49. Maximum ERIP Density per Carrier(dBW/4kHz)
VSAT	3700 4200	R	Horizontal and Vertical	72M0G7W	0.0	0.0
E50. Modulation and Services Digital						

VSAT	5925 6425	T	Horizontal and Vertical	5M60G7W	54.7	23.24
E50. Modulation and Services Digital						

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc E/W Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon(dBW/4kHz)
VSAT	Geostationary	3700 4200	95.0/ 191.0	115.93	1.89	216.11	10.49	0.0
	Geostationary	5925 6425	95.0/ 191.0	115.93	1.89	216.11	10.49	-54.24

REMOTE CONTROL POINT LOCATION

REMOTE CONTROL POINT LOCATION

E61. Call Sign NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.			E65. Phone Number
E62. Street Address			
E63. City	E67. County	E64/68. State/Country /	E66. Zip Code

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 0.25 - 24 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember - You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

II. Radiation Hazard Analyses

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: KANA Akhiok State: AK
Latitude: 56 56 43.7 Longitude: 154 10 27.0 (NAD83)
11-25-2019

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 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) = 10.0000 Watts

Antenna Gain at Earth Site (GES) = 42.2000 dBi = 16595.8691
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 71.2577 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 2.6009 W/m**2

= 0.2601 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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 29.6907 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 5.3052 W/m**2

= 0.5305 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 = $\frac{2(P)}{Sa}$ = 4.4210 W/m**2

= 0.4421 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 = $\frac{P}{Sa}$ = 2.2105 W/m**2

= 0.2210 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	4.7399	Complies with ANSI
2. Near Zone	4.4695	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	4.5579	Complies with ANSI
5. Main Reflector to Ground	4.7790	Complies with ANSI

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

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	0.7399	Complies with ANSI
2. Near Zone	0.4695	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	0.5579	Complies with ANSI
5. Main Reflector to Ground	0.7790	Complies with ANSI

6. EVALUATION

A. Controlled Environment
B. Uncontrolled Environment
All Zones comply with ANSI Standards.

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: KANA Larsen Bay State: AK
Latitude: 57 32 11.3 Longitude: 153 58 44.8 (NAD83)
11-25-2019

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 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) = 10.0000 Watts

Antenna Gain at Earth Site (GES) = 42.0000 dBi = 15848.9319
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 71.2577 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 2.4839 W/m**2

= 0.2484 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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 29.6907 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 5.3052 W/m**2

= 0.5305 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 = $\frac{2(P)}{Sa}$ = 4.4210 W/m**2

= 0.4421 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 = $\frac{P}{Sa}$ = 2.2105 W/m**2

= 0.2210 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	4.7516	Complies with ANSI
2. Near Zone	4.4695	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	4.5579	Complies with ANSI
5. Main Reflector to Ground	4.7790	Complies with ANSI

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

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	0.7516	Complies with ANSI
2. Near Zone	0.4695	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	0.5579	Complies with ANSI
5. Main Reflector to Ground	0.7790	Complies with ANSI

6. EVALUATION

A. Controlled Environment
B. Uncontrolled Environment
All Zones comply with ANSI Standards.

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: KANA Old Harbor State: AK
Latitude: 57 12 48.7 Longitude: 153 17 0.7 (NAD83)
11-25-2019

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 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) = 10.0000 Watts

Antenna Gain at Earth Site (GES) = 42.0000 dBi = 15848.9319
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 71.2577 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 2.4839 W/m**2

= 0.2484 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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 29.6907 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 5.3052 W/m**2

= 0.5305 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 = $\frac{2(P)}{Sa}$ = 4.4210 W/m**2

= 0.4421 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 = $\frac{P}{Sa}$ = 2.2105 W/m**2

= 0.2210 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	4.7516	Complies with ANSI
2. Near Zone	4.4695	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	4.5579	Complies with ANSI
5. Main Reflector to Ground	4.7790	Complies with ANSI

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

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	0.7516	Complies with ANSI
2. Near Zone	0.4695	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	0.5579	Complies with ANSI
5. Main Reflector to Ground	0.7790	Complies with ANSI

6. EVALUATION

A. Controlled Environment
B. Uncontrolled Environment
All Zones comply with ANSI Standards.

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: KANA Ouzinkie State: AK
Latitude: 57 55 28.3 Longitude: 152 29 58.3 (NAD83)
11-25-2019

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 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) = 10.0000 Watts

Antenna Gain at Earth Site (GES) = 42.0000 dBi = 15848.9319
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 71.2577 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 2.4839 W/m**2

= 0.2484 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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 29.6907 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 5.3052 W/m**2

= 0.5305 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 = $\frac{2(P)}{Sa}$ = 4.4210 W/m**2

= 0.4421 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 = $\frac{P}{Sa}$ = 2.2105 W/m**2

= 0.2210 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	4.7516	Complies with ANSI
2. Near Zone	4.4695	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	4.5579	Complies with ANSI
5. Main Reflector to Ground	4.7790	Complies with ANSI

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

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	0.7516	Complies with ANSI
2. Near Zone	0.4695	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	0.5579	Complies with ANSI
5. Main Reflector to Ground	0.7790	Complies with ANSI

6. EVALUATION

A. Controlled Environment
B. Uncontrolled Environment
All Zones comply with ANSI Standards.

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: Kobuk State: AK
Latitude: 66 54 27.3 Longitude: 156 53 1.0 (NAD83)
08-06-2019

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 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) = 42.0000 dBi = 15848.9319
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 71.2577 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 4.9677 W/m**2

= 0.4968 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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 29.6907 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 10.6103 W/m**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 = $\frac{2(P)}{Sa}$ = 8.8419 W/m**2

= 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 = $\frac{P}{Sa}$ = 4.4210 W/m**2

= 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	4.5032	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	0.5032	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.

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: 8 Mile State: AK
Latitude: 58 43 41.0 Longitude: 156 48 59.2 (NAD83)
12-04-2019

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 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) = 42.0000 dBi = 15848.9319
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 71.2577 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 4.9677 W/m**2

= 0.4968 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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 29.6907 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 10.6103 W/m**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 = $\frac{2(P)}{Sa}$ = 8.8419 W/m**2

= 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 = $\frac{P}{Sa}$ = 4.4210 W/m**2

= 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	4.5032	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	0.5032	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.

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: Yakutat State: AK
Latitude: 59 32 23.2 Longitude: 139 44 12.9 (NAD83)
12-12-2019

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 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) = 3.8000 m

Antenna Surface Area (Sa) = pi(D**2)/4 = 11.3411 m**2

Wavelength at 6.1750 GHz (lambda) = 0.0485 m

Transmit Power at Flange (P) = 60.0000 Watts

Antenna Gain at Earth Site (GES) = 46.5000 dBi = 44668.3592
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 178.6392 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 6.6833 W/m**2

= 0.6683 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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 74.4330 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 12.6971 W/m**2

= 1.2697 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 = $\frac{2(P)}{Sa}$ = 10.5809 W/m**2

= 1.0581 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 = $\frac{P}{Sa}$ = 5.2905 W/m**2

= 0.5290 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	4.3317	Complies with ANSI
2. Near Zone	3.7303	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	3.9419	Complies with ANSI
5. Main Reflector to Ground	4.4710	Complies with ANSI

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

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	0.3317	Complies with ANSI
2. Near Zone	-0.2697	POTENTIALLY HAZARDOUS
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	-0.0581	POTENTIALLY HAZARDOUS
5. Main Reflector to Ground	0.4710	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.

The MAIN Reflector Surface 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.

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: Naknek Silverbay State: AK
Latitude: 58 44 41.4 Longitude: 156 57 14.4 (NAD83)
01-10-2020

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 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)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 71.2577 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 4.6361 W/m**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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 29.6907 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 10.6103 W/m**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 = $\frac{2(P)}{Sa}$ = 8.8419 W/m**2

= 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 = $\frac{P}{Sa}$ = 4.4210 W/m**2

= 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.

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)
09-22-2020

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 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) = 60.0000 Watts

Antenna Gain at Earth Site (GES) = 41.7000 dBi = 14791.0839
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 71.2577 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 13.9084 W/m**2

= 1.3908 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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 29.6907 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 31.8310 W/m**2

= 3.1831 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 = $\frac{2(P)}{Sa}$ = 26.5258 W/m**2

= 2.6526 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 = $\frac{P}{Sa}$ = 13.2629 W/m**2

= 1.3263 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	3.6092	Complies with ANSI
2. Near Zone	1.8169	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	2.3474	Complies with ANSI
5. Main Reflector to Ground	3.6737	Complies with ANSI

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

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	-0.3908	POTENTIALLY HAZARDOUS
2. Near Zone	-2.1831	POTENTIALLY HAZARDOUS
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	-1.6526	POTENTIALLY HAZARDOUS
5. Main Reflector to Ground	-0.3263	POTENTIALLY HAZARDOUS

6. EVALUATION

A. Controlled Environment
B. Uncontrolled Environment
The FAR 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.

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.

The MAIN Reflector Surface 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.

The MAIN Reflector to GROUND 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.

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: Shungnak State: AK
Latitude: 66 53 16.8 Longitude: 157 8 18.9 (NAD83)
10-14-2020

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 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)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 71.2577 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 4.6361 W/m**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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 29.6907 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 10.6103 W/m**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 = $\frac{2(P)}{Sa}$ = 8.8419 W/m**2

= 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 = $\frac{P}{Sa}$ = 4.4210 W/m**2

= 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.

ANALYSIS OF NON-IONIZING RADIATION
for Alaska Communications Internet LLC
Site: Hooper Bay State: AK
Latitude: 61 31 40.0 Longitude: 166 6 22.5 (NAD83)
11-23-2020

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 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) = 3.8000 m

Antenna Surface Area (Sa) = pi(D**2)/4 = 11.3411 m**2

Wavelength at 6.1750 GHz (lambda) = 0.0485 m

Transmit Power at Flange (P) = 40.0000 Watts

Antenna Gain at Earth Site (GES) = 46.2000 dBi = 41686.9383
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6000

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{\text{lambda}}$ = 178.6392 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 4.1581 W/m**2

= 0.4158 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) = $\frac{D^{**}2}{4*\text{lambda}}$ = 74.4330 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 8.4648 W/m**2

= 0.8465 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 = $\frac{2(P)}{Sa}$ = 7.0540 W/m**2

= 0.7054 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 = $\frac{P}{Sa}$ = 3.5270 W/m**2

= 0.3527 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	4.5842	Complies with ANSI
2. Near Zone	4.1535	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	4.2946	Complies with ANSI
5. Main Reflector to Ground	4.6473	Complies with ANSI

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

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	0.5842	Complies with ANSI
2. Near Zone	0.1535	Complies with ANSI
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	0.2946	Complies with ANSI
5. Main Reflector to Ground	0.6473	Complies with ANSI

6. EVALUATION

A. Controlled Environment
B. Uncontrolled Environment
All Zones comply with ANSI Standards.