Frequency Coordination

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FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

PREPARED FOR GENERAL COMMUNICATIONS INCORPORATED CHALKYITSIK, ALASKA SATELLITE EARTH STATION

PREPARED BY COMSEARCH 19700 Janelia Farm Boulevard Ashburn, Virginia 20147 July 11, 2002

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1. CONCLUSIONS

AN INTERFERENCE STUDY CONSIDERING ALL EXISTING, PROPOSED AND PRIOR COORDINATED MICROWAVE FACILITIES WITHIN THE COORDINATION CONTOURS OF THE PROPOSED EARTH STATION DEMONSTRATES THAT THIS SITE WILL OPERATE SATISFACTORILY WITH THE COMMON CARRIER MICROWAVE ENVIRONMENT. FURTHER, THERE WILL BE NO RESTRICTIONS OF ITS OPERATION DUE TO INTERFERENCE CONSIDERATIONS.

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2. SUMMARY OF RESULTS

NO GREAT CIRCLE INTERFERENCE CASES WERE IDENTIFIED DURING THE INTERFERENCE STUDY OF THE PROPOSED EARTH STATION.

NO CARRIERS REPORTED POTENTIAL INTERFERENCE CASES.

3. SUPPLEMENTAL SHOWING RE: PART 25.203(C)

PURSUANT TO PART 25.203(C) OF THE FCC RULES AND REGULATIONS, THE SATELLITE EARTH STATION PROPOSED IN THIS APPLICATION WAS COORDINATED BY COMSEARCH USING COMPUTER TECHNIQUES AND IN ACCORDANCE WITH PART 25 OF THE FCC RULES AND REGULATIONS.

COORDINATION FOR THIS EARTH STATION WAS CONDUCTED WITH THE BELOW LISTED CARRIERS.

ALASCOM, INC.

4. EARTH STATION COORDINATION DATA

THIS SECTION PRESENTS THE DATA PERTINENT TO FREQUENCY COORDINATION OF THE PROPOSED EARTH STATION THAT WAS CIRCULATED TO ALL COMMON CARRIERS WITHIN ITS COORDINATION CONTOURS.

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SATELLITE EARTH STATION FREQUENCY COORDINATION DATA 07/05/2002

Company Earth Station Name, Stat Latitude (DMS) (NAD83) Longitude (DMS) (NAD83) Ground Elevation AMSL (M Antenna Centerline AGL	Ft/m)		CHALKYITS 66 39 15 143 43 26	SIK, AK .7 N .2 W / 160.93	
Receive Antenna Type:	S40362		SCIENTIFI	IC-ATLANTA	Į
	(dBi) / Diamete 3 Half Beamwidt			/ 3.6 / 1.50	
Transmit Antenna Type:	S60362		SCIENTIFI 8136	C-ATLANTA	ł
6.0 GHz Gain 3 dB / 15 dB	(dBi) / Diamete 3 Half Beamwidt	er (m) :h	45.6 /	/ 3.6 / 0.85	
Operating Mode Modulation			TRANSMIT DIGITAL	AND RECEI	VE
Emission / Receive Band)G7W - 36MC)D7W - 36MC			
Emission / Transmit Band		0G7W - 36M0 0D7W - 36M0			
Max. Available RF Power	(dBW)/4 kHz) (dBW)/MHz)	<u>45K0G7W</u> - -2.7 21.3	36M0G7W -22.6 1.4	<u>60K0D7W</u> - -2.7 21.3	- <u>36M0D7W</u> -22.6 1.4
Max. EIRP	(dBW)/4 kHz) (dBW)/MHz) (dBW)	42.9 66.9 53.4	23.0 47.0 62.6	42.9 66.9 54.7	23.0 47.0 62.6
6.0 GHz, 20% (dBW/1 MHz) 0% (dBW/1 MHz)		-146.0 -154.0		
Range of Satellite Arc (Degrees Lon Azimuth Range (Min/Max) Corresponding Elevation	gitude		91.0 W / 124.9 / 5.2 /		
Radio Climate Rain Zone			A 2		
Max Great Circle Coordin 4.0 GHz 6.0 GHz	ation Distance	(Mi/Km)	346.4 / 199.8 /		
Precipitation Scatter Co 4.0 GHz 6.0 GHz	ntour Radius (Mi/Km)	382.1 / 63.1 /		

Table of Earth Station Coordination Values 07/05/2002

Earth Station Name CHALKYITSIK AK Owner GENERAL COMMUNICATIONS INCRPORATED Latitude (DMS) (NAD83) 66 39 15.7 N Longitude (DMS) (NAD83)143 43 26.2 W Ground Elevation (Ft/m) 528.01 / 160.93 AMSL Antenna Centerline (Ft/m) 6.99 / 2.13 AGL Antenna Model SCIENTIFIC-ATLANTA 8136 Objectives: Receive -156.0 (dBW /1 MHz) Transmit -154.0 (dBW /4 kHz) TX Power -2.7 (dBW/4 kHz)

Azimuth (Deg)	Horizon Elevation Angle	Antenna Disc. Angle	Antenna Gain	4.0 GHz Coordination Distance	Antenna Gain	6.0 GHz Coordination Distance
	(Deg)	(Deg)	(dBi)	(Km)	(dBi)	(Km)
0	0.00	124.78	-10.20	284.0	-10.40	169.1
5	0.00	119.81	-10.20	284.0	-10.40	169.1
10	0.00	114.84	-10.20	284.0	-10.40	169.1
15	0.00	109.86	-10.20	284.0	-10.40	169.1
20	0.00	104.89	-10.20	284.0	-10.40	169.1
25	0.00	99.91	-10.20	284.0	-10.40	169.1
30	0.00	94.93	-10.20	284.0	-10.40	169.1
35	0.00	89.95	-10.20	284.0	-10.40	169.1
40	0.00	84.97	-10.20	284.0	-10.40	169.1
45	0.00	79.99	-10.20	284.0	-10.40	169.1
50	0.00	75.01	-10.20	284.0	-10.40	169.1
55	0.00	70.04	-10.20	284.0	-10.40	169.1
60	0.00	65.06	-10.20	284.0	-10.40	169.1
65	0.00	60.09	-10.20	284.0	-10.40	169.1
70	0.00	55.12	-10.20	284.0	-10.40	169.1
75	0.00	50.15	-10.20	284.0	-10.40	169.1
80	0.00	45.19	-9.24	290.1	-9.44	172.8
85	0.00	40.23	-8.25	296.6	-8.45	176.6
90	0.00	35.29	-6.32	309.8	-6.52	184.1
95	0.00	30.36	-5.27	317.7	-5.47	188.1
100	0.00	25.46	-3.38	331.3	-3.58	195.4
105	0.00	20.60	-0.56	352.3	-0.76	204.5
110	0.00	15.82	2.31	374.5	2.11	215.9
115	0.00	11.23	5.57	400.4	5.37	230.1
120	0.00	7.19	7.80	419.4	7.60	240.5
125	0.00	5.22	11.35	557.6	11.15	321.5
130	0.00	6.55	8.71	501.6	8.51	282.7
135	0.00	8.03	7.80	459.6	7.60	257.0
140	0.00	9.40	7.40	433.5	7.20	243.7
145	0.00	10.65	6.15	412.0	5.95	234.2
150	0.00	11.75	5.05	396.0	4.85	227.7
155	0.00	12.71	4.09	388.2	4.60	226.6
160	0.00	13.50	3.30	382.4	4.10	224.4
165	0.00	14.13	2.80	378.4	3.47	221.7
170	0.00	14.59	2.80	378.4	3.01	219.7
175	0.00	14.86	2,80	378.4	2.74	218.6
180	0.00	14.95	2.80	378.4	2.65	218.2

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Azimuth		Antenna		4.0 GHz		6.0 GHz
(Deg)	Elevation	Disc.	Antenna	Coordination	Antenna	Coordination
	Angle	Angle	Gain	Distance	Gain	Distance
	(Deg)	(Deg)	(dBi)	(Km)	(dBi)	(Km)
185	0.00	14.85	2.80	378.4	2.75	218.6
190	0.00	14.58	2.80	378.4	3.02	219.8
195	0.00	14.12	2.80	378.4	3.48	221,7
200	0.00	13.49	3.31	382.5	4.11	224.4
205	0.00	12.70	4.10	388.3	4.60	226.6
210	0.00	11.74	5.06	396.6	4.86	227.8
215	0.00	10.64	6.16	411.2	5.96	233.9
220	0.00	9.40	7.40	431.9	7.20	243.1
225	0.00	8.04	7.80	457.0	7.60	255.6
230	0.00	6.55	8.69	497.3	8.49	279.9
235	0.00	6.46	8.88	528.7	8.68	301.2
240	0.00	9.48	7.32	415.2	7.12	238.2
245	0.00	13.71	3.09	380.7	3.89	223.5
250	0.00	18.33	0.80	362.8	0.60	209.8
255	0.00	23.10	-2.06	341.0	-2.26	200.4
260	0.00	27.95	-4.38	324.1	-4.58	191.6
265	0.00	32.84	-5.77	314.2	-5.97	186.2
270	0.00	37.75	-7.30	303.0	-7.50	180.3
275	0.00	42.69	-8.74	293.4	-8.94	174.7
280	0.00	47.63	-9.73	287.0	-9.93	170.9
285	0.00	52.59	-10.20	284.0	-10.40	169.1
290	0.00	57.54	-10.20	284.0	-10.40	169.1
295	0.00	62.51	-10.20	284.0	-10.40	169.1
300	0.00	67.47	-10.20	284.0	-10.40	169.1
305	0.00	72.44	-10.20	284.0	-10.40	169.1
310	0.00	77.41	-10.20	284.0	-10.40	169.1
315	0.00	82.39	-10.20	284.0	-10.40	169.1
320	0.00	87.36	-10.20	284.0	-10.40	169.1
325	0.00	92.33	-10.20	284.0	-10.40	169.1
330	0.00	97.30	-10.20	284.0	-10.40	169.1
335	0.00	102.27	-10.20	284.0	-10.40	169.1
340	0.00	107.24	-10.20	284.0	-10.40	169.1
345	0.00	112.21	-10.20	284.0	-10.40	169.1
350	0.00	117.18	-10.20	284.0	-10.40	169.1
355	0.00	122.14	-10.20	284.0	-10.40	169.1

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5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION. I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS. I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: 14

TIMOTHY O. CRUTCHER SENIOR FREQUENCY COORDINATOR COMSEARCH 19700 Janelia Farm Boulevard Ashburn, Virginia 20147

DATED: July 11, 2002