

Prepared By

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Prepared For

**Lockheed Martin Corporation
Carpentersville, New Jersey**

Temporary Transmit-Only Earth Station
Operation Dates: 02/02/2015 - 08/02/2015

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. Verbal and written coordination was conducted with the below listed carriers on December 12, 2014.

Company

256Q Networks
AB Services LLC
ALGONQUIN GAS TRANSMISSION, LLC
AT&T Corporation
AWC Networks
Adams County Department of Emergency Svc
Affiniti PA, LLC
Allentown SMSA Limited Partnership
Appalachia Engineering Services
Appalachian Broadcasting
Atlantic City Electric Company
Auburn Data Systems, LLC
BFI Licenses, LLC
Beaver Springs Faith Baptist Church, Inc
Bedford, County of
Berk County Department of Emergency Ser
Blue Ridge Carriers
Blueline Communications
Bucks County Dept. of Emergency Communic
CNG Transmission Corporation
CONSOLIDATED EDISON COMPANY OF NEW YORK
CTAB Holdings LLC
Capital Communications of America
Carbon, County of 911 Center
Cellco Partnership - Bridgeville, PA/WV
Cellco Partnership- PA Region
Cellco Prtnrshp - Phil. Tri-State Rgn
Chester, County of
Chester, County of

Company (Continued)

China Cat Productions LLC
City of New York
Commonwealth of Pennsylvania-Radio Proj.
Comprehensive Wireless LLC
Conterra Ultra Broadband, LLC
Converge Towers LLC
Coral Reef Technologies Ltd
Coralinks
County of Burlington, Public Safety Cntr
County of Camden
County of Fayette
County of Warren, NJ
County of York
DAUPHIN COUNTY EMERGENCY MANAGEMENT
Delaware County (PA) Emergency Services
Delaware Division of Communications
Delmarva Power and Light Company
Direct Broadcast Services, Inc.
ECW Wireless, LLC
EG Broadcast Newco Corp
EMS OF NORTHEAST PENNSYLVANIA
Eastern MLG LLC
Eastern Pennsylvania EMS Council
Electric Railroad, LLC
Essex County Sheriff's Office (NJ)
Exelon Generation Company, LLC
FELHC
Federal Communications Commission
Fundamental Broadcasting LLC
Garden State Transmissions
Geodesic Networks LLC
Gloucester, County of
Greene, County of (PA)
Hardy Cellular Telephone Company
High Voltage Communications LLC
Highway Networks, LLC
Huntingdon, County of
Jefferson Microwave, LLC
Juniata County Emergency Services
Kryptick Technologies
Lackawanna, County of
Lancaster County-Wide Communications
Luzerne County Department of Public Sfty
MONMOUTH, COUNTY OF
MVC Research. LLC
Mahwah Communications
Maryland Public Broadcasting Commission
Mifflin Mobilecom
Monroe County Control Center (PA)
Montgomery County Of
Morris, County of

Company (Continued)

Nassau County Police Department
National Tower Company LLC
NeXXCom Wireless LLC
New Cingular Wireless PCS LLC -NJ
New Cingular Wireless PCS - Maryland
New Cingular Wireless PCS LLC- WV/NC/SC
New Cingular Wireless PCS LLC-DE/NH/RI
New Cingular Wireless PCS of PA LLC
New Cingular Wireless PCS, LLC - PA
New Jersey State Police
New Jersey Transit Rail Operations, Inc.
New Jersey Turnpike Authority-Pkwy Div
New Jersey, State of -NJ Transit
New York, City of
Norfolk Southern Railway
Northeast Pennsylvania SMSA LTD Ptnrsh
Northumberland, County of
OCEAN, COUNTY OF
Ocean, County of - Div of Wireless Tech.
Office of Emergency Telecom Services, NJ
Old Dominion LLC
Orange Poughkeepsie SMSA LTD Partnership
Orange and Rockland Utilities, Inc.
PEG Bandwidth, LLC
PSEG Services Corporation
Peco Energy Company
Penn Service Microwave Co., Inc.
Pennsylvania Turnpike Commission
Pike, County of PA
Pitt Power
Pittsburgh SMSA Limited Partnership
Port Authority of New York & New Jersey
Qoncept Holdings LLC
Rendezvous Communications LLC
SCS Networks
SCTF NET
SOMERSET COUNTY
SW Networks
State of Maryland, MIEMSS
Stevens Institute of Technology
Texas Eastern Communications, LLC
Thought Transmissions, LLC
Transwave Communication Systems, Inc.
Turtle Networks 6559
Turtle Networks 6562
USCOC of Cumberland, Inc.
Velox Networks LLC
Verizon Wireless (VAW) LLC - Delaware/NJ
Verizon Wireless (VAW) LLC - Maryland
Verizon Wireless (VAW) LLC-Pennsylvania
Virginia Electric & Power Company

Company (Continued)

WITF Inc.
WYOMING, COUNTY OF
Weblin Holdings LLC
White Rabbit Networks
Wireless Internetwork LLC
World Class Wireless, LLC
YAB Mobile
Zen Networks, Inc
iSignal

There are no unresolved interference objections with the stations contained in these applications.

The following section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH
Earth Station Data Sheet
19700 Janelia Farm Boulevard, Ashburn, VA 20147
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Date: 12/21/2014
Job Number: 141212COMSJC09

Administrative Information

Status TEMPORARY (Operation from 02/02/2015 to 08/02/2015)
Call Sign TEMP08
Licensee Code RCASTR
Licensee Name Lockheed Martin Corporation

Site Information **CARPENTERSVILLE, NEW JERSEY**

Venue Name
Latitude (NAD 83) 40° 38' 39.4" N
Longitude (NAD 83) 75° 11' 27.6" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 54.86 m / 180.0 ft

Link Information

Satellite Type Geostationary
Mode TO - Transmit-Only
Modulation Digital
Satellite Arc 4° W to 147° West Longitude
Azimuth Range 102.5° to 257.9°
Corresponding Elevation Angles 5.5° / 5.0°
Antenna Centerline (AGL) 9.14 m / 30.0 ft

Antenna Information**Transmit**

Manufacturer TIW
Model 14.2 Meter
Gain / Diameter 57.5 dBi / 14.2 m
3-dB / 15-dB Beamwidth 0.20° / 0.50°

Max Available RF Power (dBW/4 kHz) 7.2
(dBW/MHz) 31.2

Maximum EIRP (dBW/4 kHz) 64.7
(dBW/MHz) 88.7
(dBW) 88.0

Interference Objectives: Long Term -154.0 dBW/4 kHz 20%
Short Term -131.0 dBW/4 kHz 0.0025%

Frequency Information**Transmit 6.1 GHz**

Emission / Frequency Range (MHz) 850KFXD / 6020.0
850KFXD / 6025.0

Max Great Circle Coordination Distance 566.1 km / 351.7 mi
Precipitation Scatter Contour Radius 434.7 km / 270.1 mi

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Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
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Coordination Values

CARPENTERSVILLE, NJ

Licensee Name Lockheed Martin Corporation
Latitude (NAD 83) 40° 38' 39.4" N
Longitude (NAD 83) 75° 11' 27.6" W
Ground Elevation (AMSL) 54.86 m / 180.0 ft
Antenna Centerline (AGL) 9.14 m / 30.0 ft
Antenna Model TIW 14.2 Meter
Antenna Mode Transmit 6.1 GHz
Interference Objectives: Long Term -154.0 dBW/4 kHz 20%
Short Term -131.0 dBW/4 kHz 0.0025%
Max Available RF Power 7.2 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	3.52	102.08	-10.00	100.00
5	4.01	97.51	-10.00	100.00
10	4.15	92.51	-10.00	100.00
15	2.87	87.51	-10.00	108.36
20	2.87	82.52	-10.00	108.42
25	3.07	77.52	-10.00	104.78
30	3.50	72.52	-10.00	100.00
35	3.79	67.52	-10.00	100.00
40	3.82	62.52	-10.00	100.00
45	3.86	57.53	-10.00	100.00
50	3.66	52.53	-10.00	100.00
55	3.45	47.54	-9.93	100.00
60	3.33	42.56	-8.72	104.82
65	3.16	37.57	-7.37	112.99
70	2.88	32.61	-5.83	124.18
75	3.16	27.60	-4.02	125.69
80	3.14	22.63	-1.87	133.98
85	3.07	17.67	0.82	145.02
90	3.08	12.74	4.37	162.01
95	2.95	7.93	9.52	192.78
100	2.73	3.74	17.67	240.61
105	2.74	3.71	17.75	368.41
110	2.60	7.45	10.20	203.67
115	2.77	10.94	6.02	179.26
120	2.69	14.50	2.96	163.75
125	2.32	18.20	0.50	160.32
130	1.61	22.03	-1.57	171.33
135	2.18	24.78	-2.85	148.08
140	2.74	27.34	-3.92	133.78
145	2.33	30.44	-5.09	135.93
150	2.25	33.04	-5.98	134.18
155	1.92	35.57	-6.78	137.91
160	2.20	37.24	-7.28	131.46
165	2.65	38.35	-7.59	121.70
170	2.47	39.64	-7.95	123.79
175	1.94	40.84	-8.28	133.10
180	1.90	41.11	-8.35	133.62

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Coordination Values

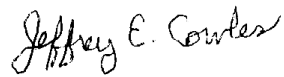
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Max Available RF Power 7.2 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
185	1.86	40.92	-8.30	133.67
190	1.24	40.83	-8.27	150.23
195	1.32	39.60	-7.94	149.37
200	2.35	37.10	-7.24	128.68
205	1.72	35.75	-6.83	142.81
210	1.78	33.44	-6.11	144.38
215	2.16	30.58	-5.14	139.18
220	3.42	26.81	-3.71	122.18
225	3.60	23.70	-2.37	123.93
230	4.84	19.63	-0.32	113.44
235	4.35	16.73	1.41	126.85
240	4.47	13.24	3.95	134.19
245	3.78	10.22	6.76	158.23
250	2.48	7.55	10.05	205.66
255	2.26	4.02	16.89	393.03
260	2.60	3.21	19.35	566.09
265	3.20	7.32	10.39	191.75
270	3.30	12.21	4.84	159.38
275	2.81	17.22	1.10	151.78
280	2.82	22.19	-1.65	139.71
285	3.08	27.15	-3.84	127.86
290	3.59	32.11	-5.67	112.00
295	4.24	37.09	-7.23	100.00
300	5.02	42.08	-8.60	100.00
305	5.51	47.09	-9.82	100.00
310	5.46	52.09	-10.00	100.00
315	5.56	57.09	-10.00	100.00
320	4.72	62.08	-10.00	100.00
325	3.93	67.09	-10.00	100.00
330	3.38	72.09	-10.00	100.00
335	3.19	77.09	-10.00	102.55
340	3.12	82.09	-10.00	103.84
345	3.01	87.09	-10.00	105.90
350	3.24	92.08	-10.00	101.54
355	3.48	97.08	-10.00	100.00

Certification

I hereby certify that I am the technically qualified person responsible for the preparation of the frequency coordination data contained in this report. I am familiar with Parts 101 and 25 of the FCC Rules and Regulations and I have either prepared or reviewed the frequency coordination data submitted with this report, and that it is complete and correct to the best of my knowledge and belief.



Jeffrey E. Cowles
Engineer III, Telecommunications
COMSEARCH
19700 Janelia Farm Blvd.
Ashburn, Virginia 20147

DATED: December 22, 2014