

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
Request for STA Using Hagerstown, Maryland C-band earth station, Call sign E030100, to Provide TT&C Services During LEOP,
IOT, and Drift for Intelsat 37e

1. Applicant

Name:	Intelsat License LLC	Phone Number:	703-559-7848
DBA Name:		Fax Number:	703-559-8539
Street:	c/o Intelsat Corporation 7900 Tysons One Place	E-Mail:	susan.crandall@intelsat.com
City:	McLean	State:	VA
Country:	USA	Zipcode:	22102 -5972
Attention:	Susan H. Crandall		



File # SES-STA-20170804-00875
E030100
Call Sign E030100 Grant Date 8-17-17
(or other identifier)
From: 8-31-17 Term Dates 9-30-17
To: 9-30-17
Approved: [Signature]

Applicant: Intelsat License LLC
Call Sign: E030100
File No.: SES-STA-20170804-00875
Special Temporary Authority (STA)



File # SES STA 20170804-00875
Call Sign E030100 Grant Date 8-17-17
(or other identifier)
From: 8-31-17 Term Dates To: 9-30-17
Approved: Paul E. Hayes

Intelsat License LLC is granted STA, for 30 days, commencing August 31, 2017, to operate its fixed earth station at 39° 35' 54.0" N.L./077° 45' 35.0" W.L. in Hagerstown, Maryland to provide launch and early orbit phase ("LEOP") services for satellite Intelsat 37e; telemetry, tracking, and command ("TT&C") functions during in-orbit testing ("IOT") at 17.5° W.L.; and TT&C functions during the drift of satellite Intelsat 37e to its final orbital location of 18° W.L. All operations will be in the 6421.5-6425.0 MHz, and 5850.0-5853.5 MHz (LHCP/ V) (Earth-to-space) frequency bands and on the following center frequencies: 4197.75 MHz, 4189.25 MHz, 4198.75 MHz, and 4199.25 MHz (LHCP/H) (space-to-Earth). All operations are authorized under the following conditions:

1. Operations will not exceed the operation power levels and parameters requested and coordinated.
2. Intelsat will coordinate the proposed IOT operations at IOT location 17.5° W.L. with operators of co-frequency satellites within six degrees. During the drift from 17.5° W.L. to the satellite's permanent orbital location 18° W.L., Intelsat will coordinate with operators of co-frequency satellites in the drift path.
3. The LEOP operations must be coordinated with all operators of satellites that use the same frequency bands and are in the LEOP path. All operators of satellites in that path will be provided with an emergency phone number where the licensee can be reached in the event that harmful interference occurs. Currently the 24x7 contact information for the Intelsat 37e mission is as follows: Ph.: (703) 559-7701 - East Coast Operations Center (primary); (310) 525-5591 - West Coast Operations Center (back-up). Request to speak with Harry Burnham or Kevin Bell.
4. Operations, shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference.
5. In the event of any harmful interference under this grant of STA, Intelsat License LLC E000296 must cease operations immediately upon notification of such interference, and must inform the Commission, in writing, immediately of such an event.
6. Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending or future Intelsat License LLC applications.
7. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at Intelsat License LLC's risk.
8. This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. §0.261, and is effective immediately.

Applicant: Intelsat License LLC
Call Sign: E030100
File No.: SES-STA-20170804-00875
Special Temporary Authority (STA)

Intelsat License LLC is granted STA, for 30 days, commencing August 31, 2017, to operate its Vertex 16-meter fixed earth station at 39° 35' 59.6" N.L./077° 45' 21.4" W.L. in Hagerstown, Maryland to provide launch and early orbit phase ("LEOP") services for satellite Intelsat 37e; telemetry, tracking, and command ("TT&C") functions during in-orbit testing ("IOT") at 17.5° W.L.; and TT&C functions during the drift of satellite Intelsat 37e to its final orbital location of 18° W.L. All operations will be in the 6421.5-6425.0 MHz, and 5850.0-5853.5 MHz (LHCP/ V) (Earth-to-space) frequency bands and on the following center frequencies: 4197.75 MHz, 4189.25 MHz, 4198.75 MHz, and 4199.25 MHz (LHCP/H) (space-to-Earth). All operations are authorized under the following conditions:

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3. The LEOP operations must be coordinated with all operators of satellites that use the same frequency bands and are in the LEOP path. All operators of satellites in that path will be provided with an emergency phone number where the licensee can be reached in the event that harmful interference occurs. Currently the 24x7 contact information for the Intelsat 37e mission is as follows: Ph.: (703) 559-7701 - East Coast Operations Center (primary); (310) 525-5591 - West Coast Operations Center (back-up). Request to speak with Harry Burnham or Kevin Bell.
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2. Contact

Name: Cynthia J. Grady **Phone Number:** 703-559-6949
Company: Intelsat Corporation **Fax Number:** 703-559-8539
Street: 7900 Tysons One Place **E-Mail:** cynthia.grady@intelsat.com

City: McLean **State:** VA
Country: USA **Zipcode:** 22102 -5972
Attention: **Relationship:** Legal Counsel

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)

3. Reference File Number or Submission ID

4a. 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):

4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station

5. Type Request

Use Prior to Grant

Change Station Location

Other

6. Requested Use Prior Date

7. City/Hagerstown

8. Latitude
(dd mm ss.s h) 39 35 59.6 N

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

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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.

12. Description

Intelsat License LLC herein requests a grant of Special Temporary Authority for 30 days, commencing August 31, 2017, to use its Hagerstown, Maryland C-band earth station, call sign E030100, to provide launch and early orbit phase services for Intelsat 37e; telemetry, tracking, and command during in-orbit testing at 17.5 W.L; and TT&C during the drift of Intelsat 37e to its final location of 18.0 W.L. Intelsat 37e is expected to be launched on August 31, 2017.



INTELSAT.

Envision. Connect. Transform.

August 4, 2017

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Request for Special Temporary Authority
Hagerstown, Maryland Earth Station E030100

Dear Ms. Dortch:

Intelsat License LLC (“Intelsat”) herein requests a grant of Special Temporary Authority (“STA”)¹ for 30 days, commencing August 31, 2017, to use its Hagerstown, Maryland C-band earth station—call sign E030100—to provide launch and early orbit phase (“LEOP”) services for Intelsat 37e; telemetry, tracking, and command (“TT&C”) during in-orbit testing (“IOT”) at 17.5° W.L; and TT&C during the drift of Intelsat 37e to its final location of 18.0° W.L. Intelsat 37e is expected to be launched on August 31, 2017.² The LEOP, IOT, and drift are expected to last approximately 70 days.

The proposed operations will be performed using the following frequencies and frequency bands: 6421.5-6425.0 MHz, and 5850.0-5853.5 in the uplink (LHCP/V); and 4197.75 MHz, 4198.25 MHz, 4198.75 MHz, and 4199.25 MHz in the downlink (LHCP/H). The proposed operations will be coordinated with all operators of satellites that use the same frequency bands and are in the LEOP path, the drift path, or are potentially affected by these operations at the IOT location.³ All operators of potentially affected satellites will be provided with an emergency phone number where the licensee can be reached in the event that harmful interference occurs.

¹ Intelsat has filed its STA request, an FCC Form 159, a \$200.00 filing fee, and this supporting letter electronically via the International Bureau’s Filing System (“IBFS”).

² The permanent orbital location for Intelsat 37e will be at 18.0° W.L. *See Policy Branch Information; Actions Taken*, Report No. SAT-01243, File No. SAT-LOA-20160915-00089 (June 9, 2017) (Public Notice). The in-orbit testing location will be 17.5° W.L. *See Policy Branch Information; Satellite Space Applications Accepted for Filing*, Report No. SAT-01255, File No. SAT-STA-20170718-00105 (July 28, 2017) (Public Notice).

Ms. Marlene H. Dortch
August 4, 2017
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The 24x7 contact information for the Intelsat 37e mission is as follows:

Ph.: (703) 559-7701 – East Coast Operations Center (primary)
(310) 525-5591 – West Coast Operations Center (back-up)

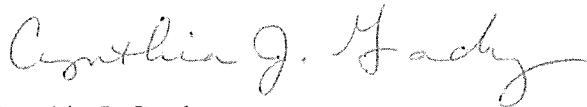
Request to speak with Harry Burnham or Kevin Bell.

In further support of this request, Intelsat herewith attaches Exhibit A, which contains technical information that demonstrates that the operation of the earth station will be compatible with its electromagnetic environment and will not cause harmful interference into any lawfully operating terrestrial facility. In the extremely unlikely event that harmful interference should occur due to transmissions to or from its earth station, Intelsat will take all reasonable steps to eliminate the interference.

Grant of this STA request will allow Intelsat to help launch and test the Intelsat 37e satellite. This, in turn, will help provide additional capacity to customers at the 18.0° W.L. orbital location and thereby promotes the public interest.

Please direct any questions regarding this STA request to the undersigned at (703) 559-6949.

Respectfully submitted,



Cynthia J. Grady
Regulatory Counsel
Intelsat Corporation

cc: Paul Blais

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Intelsat License LLC
HAGERSTOWN, MD
(E030100)
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
August 04, 2017

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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.

2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

3. SUPPLEMENTAL SHOWING

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 data for this earth station was sent to the below listed carriers with a letter dated 07/05/2017.

Company

256Q Networks
AB Services LLC
AT&T Communications of Virginia, LLC
AT&T Corp.
Adams County Department of Emergency Svc
Affiniti PA, LLC
Albermarle, County of, Virginia
American Electric Power Service Corp
Appalachia Engineering Services
Appalachian Power Company
Argos Engineering, LLC
Atlantic Broadband (Penn), LLC
Atlantic City Electric Company
Atlantic, County of
Baltimore County of Maryland
Baltimore Gas and Electric Company
Beaver Springs Faith Baptist Church, Inc
Bedford County of
Believe Wireless, LLC
Berks County Department of Emergency Ser
Blair County 911
Blue Ridge Carriers
Blueline Communications
CNG Transmission Corporation
Calvert, County of
Cambria, County of
Capital Communications of America
Caroline County, VA
Carroll, County of
Celco Partnership - Bridgeville, PA/WV
Celco Partnership - Southern Virginia
Celco Partnership- PA Region
Celco Partnership-WDC/Baltimore
Celco Prtnrshp - Phil. Tri-State Rgn
Centre Communications Inc.
Centre, County of
Charles, County of
Chester, County of
City of Fredericksburg
Citynet

Clinton, County of
Columbia Gas Transmission, LLC
Columbia, County
Commonwealth of Pennsylvania-Radio Proj.
Comprehensive Wireless LLC
Conterra Ultra Broadband, LLC
Coralinks
County of Augusta
County of Culpeper
County of Fayette
County of Frederick
County of York
DSRC Networks
Dauphin County Emergency Management
Delaware County (PA) Emergency Services
Delaware Division of Communications
Delmarva Broadcasting Company
Delmarva Power and Light Company
ECW Wireless, LLC
Eastern MLG LLC
Enoch Pratt Free Library
Essex, County of
Exelon Generation Company, LLC
FELHC, Inc.
Frederick County
Fulton County of (PA)
Fundamental Broadcasting LLC
Garden State Transmissions
Getwireless.Net
Gloucester, County of
Great Scott Broadcasting
Greene, County of (PA)
Hanover, County of
Hardy Cellular Telephone Company
Hardy County OEM/E911
Harrisonburg-Rockingham ECC
High Voltage Communications LLC (CFN)
Huntingdon County, Pa
Indiana, County of
Jackson County West Virginia
Jefferson Microwave, LLC
Juniata County Emergency Services
King and Queen County
Kryptick Technologies
Lancaster County-Wide Communications
Limitless Mobile, LLC
Loudoun, County of
MVC Research. LLC
Maryland Public Broadcasting Commission
Maryland State Highway Administration
Maryland, State of - Dept.of Info & Tech
Montgomery County Of
National Tower Company LLC
New Cingular Wireless PCS LLC - NJ
New Cingular Wireless PCS - Maryland
New Cingular Wireless PCS LLC - DC

New Cingular Wireless PCS LLC - VA
New Cingular Wireless PCS LLC - WV,NC,SC
New Cingular Wireless PCS LLC-DE/NH/RI
New Cingular Wireless PCS, LLC - PA
New Jersey, State of -NJ Transit
New Line Networks, LLC
Norfolk Southern Railway
Northumberland County DPS/911
Old Dominion LLC
PA Communications
PSEG Services Corporation
Peco Energy Company
Pennsylvania Turnpike Commission
Peoples Natural Gas Company LLC
Pepeco Holdings Inc.
Perry, County of
Perseus Technology Holdings USA Inc.
Pittsburgh SMSA Limited Partnership
Preston County Office of Emergency Manag
Prince George's County
Prince William, County of
Radio One Inc
Rappahannock Electric Cooperative
Rural Broadband Network Services LLC
SW Networks
Shenandoah Personal Communications, LLC
Shenandoah Valley Electric Cooperative
Somerset, County of
South Central Task Force (SCTFNET)
Southern Maryland Electric Cooperative I
Spotsylvania, County of
St. Mary's County of (MD)
Stafford, County of
State of Maryland, MIEMSS
T-Mobile License LLC
Texas Eastern Communications, LLC
Thought Transmissions, LLC
Transcontinental Gas Pipeline Corp.
US Cellular Operating Company, LLC (WI)
USCOC of Cumberland, Inc.
USCOC of Virginia RSA #3, Inc.
USOC of Pennsylvania RSA No 10 B2 Inc.
Uniti Fiber PEG, LLC
Verizon Maryland, Inc.
Verizon Wireless (VAW) LLC - Maryland
Verizon Wireless (VAW) LLC - W/B/V Mkts
Verizon Wireless (VAW) LLC-Pennsylvania
Verizon Wireless VAW LLC - West Virginia
Verizon Wireless VAW LLC-Southern VA
Virginia Broadband, LLC
Virginia Department of State Police
Virginia Electric & Power Company
WV DHHR BPH, Office of Ems, Com. Div.
Warrenton Fauquier Joint Communications
Washington Gas Light Company
Washington Suburban Sanitary Commission

Weblin Holdings LLC
Westmoreland, County of
Wicomico County
Wireless Internetwork LLC
World Class Wireless, LLC
YAB Mobile
iSignal
xWave Engineering LLC

4. EARTH STATION COORDINATION DATA

This 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
(703)726-5500 <http://www.comsearch.com>

Date: 08/04/2017
Job Number: 170705COMSGE07

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E030100
Licensee Code INTELS
Licensee Name Intelsat License LLC

Site Information **HAGERSTOWN, MD**

Venue Name
Latitude (NAD 83) 39° 35' 59.6" N
Longitude (NAD 83) 77° 45' 21.4" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 163.98 m / 538.0 ft

Link Information

Satellite Type Geostationary
Mode TO - Transmit-Only
Modulation Analog and Digital
Satellite Arc 6° W to 149° West Longitude
Azimuth Range 101.9° to 257.8°
Corresponding Elevation Angles 5.3° / 5.7°
Antenna Centerline (AGL) 8.23 m / 27.0 ft

Antenna Information **Transmit - FCC32**

Manufacturer Vertex
Model 16.4 THC
Gain / Diameter 59.0 dBi / 16.4 m
3-dB / 15-dB Beamwidth 0.38° / 0.76°

Max Available RF Power (dBW/4 kHz) 0.7
(dBW/MHz) 24.7

Maximum EIRP (dBW/4 kHz) 59.7
(dBW/MHz) 83.7

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 - 1M20FXD / 6421.5 - 6425.0

Max Great Circle Coordination Distance 493.6 km / 306.7 mi
Precipitation Scatter Contour Radius 194.4 km / 120.8 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values	HAGERSTOWN, MD
Licensee Name	Intelsat License LLC
Latitude (NAD 83)	39° 35' 59.6" N
Longitude (NAD 83)	77° 45' 21.4" W
Ground Elevation (AMSL)	163.98 m / 538.0 ft
Antenna Centerline (AGL)	8.23 m / 27.0 ft
Antenna Model	Vertex 16.4 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	0.7 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.37	101.82	-10.00	164.34
5	0.29	96.84	-10.00	174.27
10	0.25	91.86	-10.00	178.86
15	0.31	86.88	-10.00	172.09
20	0.28	81.90	-10.00	175.27
25	0.29	76.92	-10.00	174.00
30	0.27	71.94	-10.00	176.88
35	0.24	66.96	-10.00	179.93
40	0.27	61.99	-10.00	176.74
45	0.36	57.01	-10.00	164.63
50	0.42	52.03	-10.00	158.41
55	0.31	47.07	-9.82	173.16
60	0.00	42.14	-8.62	189.16
65	0.22	37.17	-7.25	192.14
70	0.22	32.23	-5.71	198.48
75	0.22	27.31	-3.91	204.96
80	0.25	22.42	-1.76	209.39
85	0.24	17.59	0.87	220.78
90	0.00	12.98	4.17	240.39
95	0.00	8.67	8.55	262.17
100	0.00	5.62	13.26	493.62
105	0.00	6.15	12.28	340.70
110	0.00	9.60	7.45	256.23
115	0.00	13.27	3.93	239.24
120	0.00	16.89	1.31	227.16
125	0.00	20.41	-0.75	218.24
130	0.00	23.83	-2.43	211.34
135	0.00	27.11	-3.83	205.84
140	0.00	30.23	-5.01	202.96
145	0.00	33.14	-6.01	199.15
150	0.00	35.81	-6.85	195.93
155	0.00	38.20	-7.55	193.25
160	0.00	40.26	-8.12	191.06
165	0.00	41.92	-8.56	189.37
170	0.00	43.16	-8.88	188.16
175	0.00	43.92	-9.07	187.43
180	0.00	44.17	-9.13	187.19
185	0.00	43.92	-9.07	187.43

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147

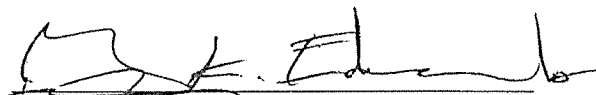
(703)726-5500 <http://www.comsearch.com>

Coordination Values	HAGERSTOWN, MD
Licensee Name	Intelsat License LLC
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Interference Objectives: Long Term	-154.0 dBW/4 kHz 20%
Short Term	-131.0 dBW/4 kHz 0.0025%
Max Available RF Power	0.7 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	43.16	-8.88	188.16
195	0.00	41.92	-8.56	189.37
200	0.00	40.26	-8.12	191.07
205	0.00	38.20	-7.55	193.25
210	0.31	35.56	-6.78	185.40
215	0.42	32.81	-5.90	177.58
220	0.38	29.94	-4.91	185.53
225	0.47	26.76	-3.69	181.82
230	0.50	23.47	-2.26	185.60
235	0.55	20.03	-0.54	189.67
240	0.59	16.49	1.57	197.02
245	0.57	12.89	4.25	207.52
250	0.52	9.25	7.85	226.91
255	0.57	5.83	12.86	332.86
260	0.42	5.72	13.07	472.21
265	0.36	8.96	8.19	243.59
270	0.42	13.29	3.91	217.34
275	0.39	17.99	0.63	205.52
280	0.28	22.83	-1.96	205.68
285	0.22	27.72	-4.07	204.34
290	0.25	32.62	-5.84	194.40
295	0.27	37.55	-7.37	186.92
300	0.33	42.49	-8.71	175.06
305	0.42	47.44	-9.90	159.20
310	0.39	52.41	-10.00	161.98
315	0.29	57.38	-10.00	173.80
320	0.22	62.35	-10.00	182.22
325	0.23	67.32	-10.00	180.94
330	0.35	72.30	-10.00	167.96
335	0.41	77.27	-10.00	160.01
340	0.38	82.25	-10.00	162.97
345	0.34	87.23	-10.00	168.53
350	0.32	92.21	-10.00	171.42
355	0.40	97.18	-10.00	160.89

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, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT 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: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: August 04, 2017