Virginia Space Update

Senate Finance Committee
February 4, 2015

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Executive Director
Virginia Commercial Space Flight Authority
A Brief History of ‘Virginia Space’

1995 – VCSFA created by Virginia
1997 – NASA Space Act Agreement
1997 – FAA launch license for orbit
1997 – Spaceport established

2006 – Launched TacSat-2, Pad 0B
2007 – Launched NFIRE, Pad 0B
2009 – Launched TacSat-3, Pad 0B
2011 – Launched ORS-1, Pad 0B
2013/2014 MARS Launch Manifest

- 22 February 2013: Antares Hot Fire Test  PAD 0A
- 21 April 2013: Antares Test Flight  PAD 0A
- 6 September 2013: LADEE Launched to the Moon  PAD 0B
- 18 September 2013: Antares ORB-D1 Launched to ISS  PAD 0A
- 19 November 2013: ORS-3  PAD 0B
- 9 January 2014: Orb-1 Launched to ISS  PAD 0A
- 13 July 2014: Orb-2 Launched to ISS  PAD 0A
Orb-3 Launch Failure

October 28, 2014 Antares experienced a failure after lift-off from the Virginia Space Mid-Atlantic Regional Spaceport (MARS) Pad 0A
MARS Pad 0A

Water Deluge System

Lightning Protection System

Ramp

RP-1 Propellant

Transporter Erector Launcher (TEL)

Launch Mount

Antares Hot Fire Test Article

Liquid Fueling Facility (LFF)
LOX, LN2, GN2, He

Flame Trench
- Pad 0A complex escaped severe damage
- Estimated Cost to Repair: Not to Exceed $20M
- Estimated Time to Repair: Approximately 12 months
Backfill of Crater Nearing Complete
Antares Program Near-term Plan

2014

Orb-3 Launch Failure

2015

MARS Pad 0A

Pad Repairs

Retest & Recertification

CCAFS Pad 41

2016

Antares Hot fire

Antares Cygnus RTF

Antares Cygnus

Antares Cygnus

2017

Antares Cygnus

Antares Cygnus

CRS-2 =>

Cygnus Atlas V

Backup Cygnus Atlas V
Virginia Space UAS Runway

International Space Station
ON-RAMP

Moon Ahead

UAS Runway
Agreements

- Reviewing draft NASA SAA for UAS Runway Construction and Ops, delivered Nov. 18
- Negotiations required to resolve issues

Funding

- $5.8M for the UAS Runway appropriated to Virginia Space in the FY15 Budget
- Funding available to VCSFA upon completion of the NASA Land Use Agreement

Runway Construction

- 3000’ x 75’ (with 35’ cleared on the sides), includes staging pad and electrical power
- For cost savings through efficiencies, utilizing VDOT to support engineering services
Positive Economic Impact

- Over 100 new aerospace jobs on the Eastern Shore in support of the Antares program to resupply International Space Station
- Virginia Space UAS Runway construction and operations
- Virginia Space STEM internships help build a local high-tech aerospace workforce on the Eastern Shore
- Travel and tourism to see the launches from Wallops; new Chincoteague Marriott Fairfield Inn and adjoining restaurant
The Final Frontier
Part of Virginia’s New Economy