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With \$2 Million Left on Wallops Repair Bill, NASA and Virginia Look to Orbital ATK To Dig Deeper

by [Dan Leone](#) — May 15, 2015



Both NASA and the state of Virginia say Orbital ATK should provide the remaining \$2 million needed to finish repairing Pad 0A at the state-owned Mid-Atlantic Regional Spaceport. This photo was taken by a NASA photographer Oct. 29, only a day after Orbital ATK's Antares rocket exploded on liftoff during what was supposed to be the company's third paid cargo resupply mission to the international space station. Credit: NASA/Terry Zaperach

A Virginia-owned launch pad damaged in October when Orbital ATK's Antares rocket exploded moments after liftoff is almost fixed, but the company is at loggerheads with the state and the federal government over who should pay the last \$2 million owed in repairs.

The accident, blamed on an engine failure, caused about \$13 million worth of damage to the pad alone, according to Dale Nash, executive director of the Virginia Commercial Space Flight Authority.

NASA has covered about \$5 million of the repair tab, while Dulles, Virginia-based Orbital ATK provided another \$3 million. Virginia contributed too, committing roughly \$3 million of the state-funded spaceflight authority's \$16 million annual operating budget.

That leaves another \$2 million or so to complete repairs of Pad 0A at the Mid-Atlantic Regional Spaceport, a state-leased corner of NASA's Wallops Flight Facility in Wallops Island, Virginia. The pad was developed to support Orbital ATK's cargo resupply missions to the International Space Station under the company's eight-flight, \$1.9 billion Commercial Resupply Services contract with NASA.

Virginia wants to finish pad repairs by September, but is funded only through August, due to the \$2 million shortfall, Nash said.

While that is only a small fraction of the \$90 million Virginia spent to build Pad 0A in the first place, it is \$2 million more than the Commonwealth of Virginia is willing to spend repairing damage that, in the opinion of Virginia Gov. Terry McAuliffe's (D) administration, it did not cause.

"We believe Orbital is responsible for the damage to the pad," Virginia Transportation Secretary Aubrey Layne said in a May 12 phone interview. "We do not see it as a primary obligation of the commonwealth."

Neither Layne nor Nash would say how exactly how or when the remaining \$2 million became a point of disagreement among the involved parties.

Layne told *SpaceNews* only that there is "a disagreement as to where the liability lies."

"It's not with Virginia," Layne said.

Orbital ATK spokeswoman Jennifer Bowman would not address the pad's unpaid repair bills.

“We are confident the pad will be fully restored in the September or October time frame, well in advance of the critical path to support a stage hot-fire test in December or January,” Bowman wrote in a May 13 email. “The next launch of Antares from Wallops will be in March 2016.”

NASA, meanwhile, is not interested in picking up what is left of the tab, despite the fact that agency wound up with an extra \$20 million in its 21st Century Launch Complex budget as part of the 2015 omnibus spending bill signed in December.

Ahead of the bill’s passage, U.S. Sens. Tim Kaine and Mark Warner — former Virginia governors whose administrations shepherded Pad 0A through conception and construction — took credit for plussing up the 21st Century Launch account, announcing in a joint press release the money should be used to repair the damage Antares caused when it exploded on what would have been its third paid cargo run.

NASA, which was not obligated under the bill to use any of the money to fix Pad 0A, sent \$5 million to Wallops before washing its hands of the matter.

NASA’s reasoning, spokesman David Weaver told *SpaceNews* in April when the agency released the repair funds, is that the agency is not paying Orbital ATK to operate a spaceport, but to deliver cargo. That makes pad repairs the company’s problem — or at least not NASA’s problem.

“Under the contracts and agreements with our partners at Wallops — Orbital ATK and the Virginia Commercial Space Flight Authority — the operability of the Pad 0A launch facilities is the responsibility of the Mid-Atlantic Regional Spaceport and Orbital ATK,” Weaver wrote in an email.

Orbital ATK is planning to replace the Aerojet Rocketdyne AJ-26 engines blamed for the October Antares failure for Russian-made RD-181 engines from NPO Energomash, the Russian company that builds the RD-180 engine for United Launch Alliance’s vaunted



“We have lived up to our operating agreement. We didn’t damage the pad. We believe Orbital is responsible for the damage to the pad,” Virginia Transportation Secretary Aubrey Layne told *SpaceNews*. Credit: Virginia Department of Transportation

Atlas 5. The U.S. Congress in 2014 enacted a phaseout of Russian engines for U.S. military space launches. The ban does not apply to NASA or commercial uses of the engines.

Both the AJ-26, an imported Soviet-surplus engine refurbished for Orbital by Aerojet Rocketdyne, and the RD-181 are liquid-fueled motors that burn kerosene with liquid oxygen. That fundamental similarity allows Virginia to make do with relatively minor modifications to the plumbing at Pad 0A ahead of the next planned Antares launch there in 2016.

In the meantime, Orbital has purchased two Atlas 5 launches from ULA to continue cargo deliveries for NASA. The first ULA-assisted launch of Orbital's Cygnus cargo tug is slated for October or November.

The Future of Virginia's Space Coast

Even after NASA, Virginia and Orbital ATK resolve the matter of repairing Wallops Island's Pad 0A, broader questions remain in Virginia's capital about the state-owned spaceport.

Antares launched successfully three times from the Mid-Atlantic Regional Spaceport (MARS) before the 2014 accident destroyed a load of NASA cargo bound for the International Space Station and caused \$13 million in damages to a launch pad the state paid \$90 million to build.



More than six months after the Orbital ATK launch failure, crews are making what Virginia spaceport chief Dale Nash called "an awful lot" of progress repairing Pad 0A, shown here in mid-May 2015. Assuming someone quickly provides the remaining \$2 million needed for the rest of

Day-to-day spaceport operations, including launch-day support and year-round maintenance of the pad's cryogenic plumbing, are carried out by the state-funded Virginia Commercial Space Flight Authority. Virginia also collects, under a 2012 agreement with Orbital ATK, a \$1.5 million fee every time the Dulles, Virginia-based firm launches an ISS cargo mission from Pad 0A.

the repairs, the pad could be fixed by September or October, Nash said. Credit: Mid-Atlantic Regional Spaceport

Virginia Gov. Terry McAuliffe, who took office five years after the state broke ground on Pad 0A, is questioning whether the model his

predecessors put in place is the right one for the state's budding launch industry.

"The governor does not believe it's a sustainable way forward and has charged the board of the spaceport to look at that as we move forward," state Transportation Secretary Layne told *SpaceNews* May 11.

Practically speaking, MARS is only set up to support Orbital ATK launches. Supporting other rockets would most likely mean building more launch pads, since Pad 0A is tailored for the liquid-fueled Antares and Pad 0B, the port's other pad, is customized for the solid-fueled, converted Peacekeeper missile Orbital ATK markets as Minotaur-C.

MARS management was hunting for other spaceport tenants before the Oct. 28 accident that destroyed Antares, but business development has taken a back seat to pad repairs, MARS chief Nash told *SpaceNews*.

"Our crews have done an awful lot with a little bit, and we hope to have the pad rebuilt and ready to begin integrated testing at the end of September," Nash said May 12.

Nash, a spaceport veteran who ran Alaska's space development agency before coming to Virginia, hinted that the state might demand higher per-launch fees from Orbital.

"We believe that we can move to a more sustainable model with an increase in launch activity and additional revenues generated as we go forward," he said.

Orbital ATK, which is being pressed by NASA and Virginia to increase its \$3 million contribution to Pad 0A repairs, declined through spokeswoman Jennifer Bowman to comment about possible fee hikes.

Whatever the outcome of negotiations between Orbital ATK and Virginia, it is unlikely that MARS, or for that matter any other state-sponsored spaceport, would be able to get by without government support of some form, said Kay Sears, a member of the Virginia Commercial Space Flight Authority's board of directors and president of Intelsat General Corp.

The main reason, Sears said, is that there is not enough demand for launch services to keep even a small spaceport open if launch fees are the port's only source of revenue.

“There’s a fundamental model with the state-sponsored spaceports that we’ve got to figure out, and it’s going to require state funding of some kind,” Sears said in a May 15 phone interview. “We need more launch options, and the more we have the better.”

The McAuliffe administration, meanwhile, remains conditionally supportive of Virginia continuing to launch rockets.

“We hope we work this out,” Layne said. “We’d like to see spaceflight continue. From our perspective, we believe the appropriate action is to share in that responsibility.”

Orbital Sciences Antares Explosion at Wallops from 3000ft



Pilot Ed Sealing captured this video of the Antares launch failure in October while cruising nearby the pad in a Cessna 177 Cardinal at an altitude of about 915 meters.

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