

**BEFORE THE
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C.**

IN THE MATTER OF

Petition of BNSF Railway Company for Exemption

Docket Number: FAA-2015-7512

COMMENTS OF THE SMALL UAV COALITION

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The Small UAV Coalition¹ is pleased to provide its comments in support of BNSF Railway Company's ("BNSF") petition for exemption under 49 U.S.C. §44701(f) and section 333 of the FAA Modernization and Reform Act to permit BNSF to operate small unmanned aircraft systems ("sUAS") beyond the visual line of sight ("BVLOS") to inspect its rail infrastructure as part of the Federal Aviation Administration's ("FAA's") Pathfinder 3 Program and BNSF's Cooperative Research and Development Agreement ("CRDA") with the FAA.

Members of the Small UAV Coalition share an interest in advancing regulatory and policy changes that will permit the operation of small UAVs in the near term, within and beyond the line of sight, with varying degrees of autonomy, for commercial, consumer, recreational and philanthropic purposes. We applaud the FAA for establishing its Pathfinder Program, and strongly support this and similar research, development, and testing programs. The Coalition believes there are additional steps the FAA can take to broaden the authority to conduct commercial operations as part of the section 333 process as well as its general statutory exemption authority.² In particular, the FAA has the authority and the discretion to grant the relief requested by BNSF in its petition.

¹ Members of the Small UAV Coalition include 3D Robotics, AirMap, AGI, Amazon Prime Air, Botlink, DJI Innovations, Drone Deploy, Flirtey, Google[x] Project Wing, GoPro, Intel, Kespry, Parrot, PrecisionHawk, Strat-Aero, Verifly, Verizon Ventures, and Zero Tech.

² Paragraph (b)(1) of Section 333 authorizes the FAA to permit commercial operations of sUAS after considering a number of factors, including the weight, size, speed and operational capability of the sUAS, "proximity to airports and populated areas, and operation within visual line of sight" The Coalition believes this section does not prohibit BVLOS operations under section 333 provided that the FAA assessment called for in this section concludes that such operations "do not create a hazard to users of the national airspace system."

In the preamble to the FAA's sUAS proposed rule, the FAA invited comments on whether it should permit BVLOS operations in that or a future rulemaking. The Coalition urged the FAA in its comments (pages 4-5) to allow BVLOS as part of the sUAS rulemaking:

The Coalition believes that whether and under what circumstances BVLOS operations may be permitted should depend not only on technological capabilities of the sUAS but also on the operational circumstances of a sUAS operation (i.e., airspace, altitude, and the geographic area). For example, operation of a sUAS BVLOS in a rural or remote setting, such as timberland or desert, or entirely over a person's property, may not require the degree of technological capability as BVLOS operations in suburban or urban environments necessitate.

Use of deviation authority, letter of agreement, or Notice to Airmen ("NOTAM"), would give the FAA the flexibility to permit certain BVLOS in the relatively near term rather than in a future multi-year rulemaking.

... The key, in the Coalition's view, is for the FAA to establish a process by which it may authorize the BVLOS operation of a sUAS (or at least Extended Line of Sight operations) based on the operational circumstances of the mission, technological capabilities of the sUAS, if needed, and the training and experience of the sUAS operator. The FAA also should foster the implementation of BVLOS operations through both simulated and live testing, which other countries have initiated.

The Coalition is pleased that the FAA is moving forward with BVLOS research and testing as part of its Pathfinder Program. The proposed BNSF operations, to be conducted largely over remote and rural areas, over land owned or controlled by BNSF, and in areas substantially elevated, fenced, or gated from public access, are ideally-suited to serve as the initial testing project for BVLOS operations, because of their much lower risk profile. BNSF explains that it will conduct its BVLOS operations below 500 feet AGL, at "relatively low speeds," with proper notice to airports and/or Air Traffic Control and in compliance with any ATC direction, and with Notices to Airmen ("NOTAMS") and other outreach to the military and general aviation community.³

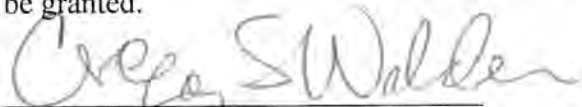
BNSF will operate only sUAS models that have received an airworthiness certificate in the restricted or experimental category. The Coalition believes that section 333 authorizes the FAA to permit BVLOS operations using an sUAS without an airworthiness certificate, and urges the FAA to consider such operations if requested by petitioners outside of the Pathfinder Program.

BNSF also plans to use technology as part of a "staggered, multi-tiered approach" to collision avoidance, whether with other aircraft or obstacles. That technology will purportedly detect both the presence of other aircraft and their precise location, resulting in a level of situational awareness greater than what a VFR pilot would have. Because BNSF provided information about this technology to the FAA confidentially and did not place it in the public docket, the Coalition is unable to evaluate or endorse this particular technology. We do strongly support BNSF's petition, because these BVLOS operations will help advance the FAA's and industry's

³ BNSF also explains that it will initially conduct operations during daylight hours. The Coalition believes that BNSF should be permitted to conduct its BVLOS operations at night, provided that safety measures are implemented to address any additional risk over daylight operations.

knowledge and experience with sense- or detect-and-avoid technology, a necessary element for safe BVLOS operations in most operational environments, as well as in the operational ecosystem contemplated in a Unmanned Traffic Management (“UTM”) system.

Accordingly, the Small UAV Coalition strongly supports BNSF’s petition and recommends that it be granted.

A handwritten signature in cursive script that reads "Gregory S. Walden". The signature is written in black ink and is positioned above a horizontal line.

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