



**American
Fuel & Petrochemical
Manufacturers**

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U.S. Department of Transportation
Docket Operations, M-30
1200 New Jersey Avenue, SE
Room W12-140
West Building Ground Floor
Washington, DC 20590

**Re: American Fuel & Petrochemical Manufacturers Comments to the UAS
BVLOS Operations Request for Comment (Docket No. FAA-2023-1256)**

Dear Acting Administrator Trottenberg:

American Fuel & Petrochemical Manufacturers (AFPM) is the leading trade association representing the makers of the fuels that keep Americans moving and the petrochemicals that are the essential building blocks for modern life. The potential benefits of uncrewed aircraft system (UAS) operations for refineries, petrochemical manufacturers, and their customers are great and we appreciate this opportunity to comment on the Federal Aviation Administration's (FAA) Request for Comment on UAS beyond visual-line-of-sight (BVLOS) operations.

AFPM is a national trade association representing nearly all United States refining and petrochemical manufacturing capacity. AFPM members produce the fuels that drive the U.S. economy and the chemical building blocks integral to millions of products that make modern life possible.

The potential benefits of UAS operations for refineries, petrochemical manufacturers, and their customers are great. Among other activities, UAS can be used to inspect and monitor equipment and facilities, or to access and evaluate emergency situations from different perspectives. By utilizing UAS, the need for human personnel to directly undertake such potentially hazardous activities is greatly reduced, if not eliminated.

While the safety benefits and operational efficiencies gained through the use of UAS are significant for refineries, petrochemical manufacturers and other critical infrastructure owners and operators, the current regulatory and policy framework in the United States, including restrictions on the ability to operate UAS BVLOS, makes it difficult to take full advantage of these potential safety and efficiency benefits.



Broadly enabling UAS flights BVLOS in a safe and secure manner is critical to unlocking the full scope of safety and efficiency benefits of UAS technology to our members, their customers and the American public more broadly. The FAA's Beyond Visual Line of Sight Aviation Rulemaking Committee (BVLOS ARC) was chartered to explore this exact issue and the ARC's Final Report to the FAA included thoughtful recommendations from a diverse range of industry experts on how to safely and effectively modernize a regulatory framework that never contemplated the existence of UAS when originally developed. To normalize safe, scalable, and economically viable BVLOS UAS operations in the United States, it is essential that the FAA streamline and modernize its current approval processes to catch up with the current state of UAS technology.

The BVLOS ARC report was a crucial first step toward unlocking the countless public benefits of BVLOS UAS operations, and the recommendations made by the ARC in its Final Report should guide the FAA's efforts to expand the integration of UAS BVLOS operations in the National Airspace System (NAS). AFPM agrees with the recommendations made by the BVLOS ARC. Many of the ARC's recommendations address the questions raised in the Request for Comment and the ARC's recommendations should, wherever possible, be leveraged to inform the issues raised in the Request for Comment.

AFPM is a member of the Commercial Drone Alliance (CDA) which served as a Working Group lead on the FAA BVLOS ARC. The CDA also filed comments to this FAA Request for Comment and AFPM fully supports the CDA's comments. In addition to the comments filed by the CDA, AFPM offers the following additional comments:

- UAS BVLOS approval processes should be performance-based and recognize a range of mitigations to achieve the required level of safety. The framework established by the FAA should be flexible enough to account for a wide variety of detect and avoid (DAA) systems that currently exist as well as future DAA technology that will be developed.
- DAA systems may be needed or appropriate to support some UAS BVLOS operations, however this is not universally true. Depending on other mitigation adopted by an operator, including many pre-flight strategic mitigations, a DAA system may not be necessary to ensure a BVLOS operation can be conducted safely (i.e., the ARC's recommendation that approval processes be risk-based and that mitigations be sufficient to achieve an acceptable level of risk for a given BVLOS operation).
- AFPM fully supports the ability of UAS operators to rely upon infrastructure shielding mitigations to support the safety-case for UAS BVLOS operations. Shielding mitigations represent a safe, common-sense solution to enabling BVLOS operations. This is particularly true for AFPM members given that their UAS operations already typically occur at low altitudes in close proximity to critical infrastructure assets, including assets located on fixed controlled-access sites, as well as long-line linear infrastructure assets like pipelines. The FAA should broadly enable and expand BVLOS shielding techniques. This is particularly true for operations occurring in critical infrastructure environments, however shielding techniques could be used to



support safe BVLOS operations outside of critical infrastructure environments as well. The FAA should define shielded operations broadly to include the volume of airspace surrounding all obstacles and structures that create a hazard to air navigation and which limit the ability of crewed aircraft to operate in the vicinity.

- While AFPM agrees with the ARC's recommendation that the FAA develop and implement a comprehensive regulatory framework that will enable safe, routine and commercially viable UAS BVLOS operations without the need for burdensome case-by-case exemptions and waivers, in the near-term, it is critical that the FAA also focus on streamlining its processes for issuing exemptions, waivers and other operational approvals necessary to conduct BVLOS operations under the current regulatory framework. Wherever possible, the FAA should build upon existing precedents and issue exemptions on a summary grant basis.

Finally, AFPM supports and encourages the FAA to grant the exemptions sought by the petitioners in the four petitions for exemption applications that the FAA posted for public comment in conjunction with its Request for Comment on UAS BVLOS operations.¹ With appropriate safety mitigations, the UAS BVLOS operations proposed by these petitioners can all be conducted safely and there are significant safety, efficiency, economic and environmental benefits associated with their proposed operations that are in the public interest.

We appreciate the FAA's consideration of these comments and look forward to continued engagement with the agency as it works to expand the scope of UAS BVLOS operations that bring significant benefits to our members, their customers, and the millions of Americans who depend upon fuel and petrochemicals every day. We look forward to working with the FAA to create a practical BVLOS program. If you need further information or have any questions, please contact me at jgunnulfson@afpm.org or at 202-844-5483.

Respectfully,

Jeff Gunnulfson
Senior Director-Security & Risk Management Issues
AFPM

¹ Phoenix Air Unmanned, LLC (Docket No. FAA-2022-0124); Zipline International, Inc. (Docket No. FAA-2020-0499); UPS Flight Forward, Inc. (Docket No. FAA-2019-0628); uAvionix Corp. (Docket No. FAA-2022-0921).