



A bold voice for transportation workers

April 24, 2015

Lance Nuckolls
Office of Aviation Safety
Unmanned Aircraft Systems Integration Office, AFS-80
Federal Aviation Administration
490 L'Enfant Plaza East, SW Suite 3200
Washington, DC 20024

**RE: Operation and Certification of Small Unmanned Aircraft Systems
Notice of Proposed Rulemaking
Docket No. FAA-2015-0150; Notice No. 15-01
RIN 2120-AJ60
Federal Aviation Administration**

Dear Mr. Nuckolls:

On behalf of the Transportation Trades Department, AFL-CIO (TTD), I write to comment on the Federal Aviation Administration's (FAA) Notice of Proposed Rulemaking (NPRM) on the Operation and Certification of Small Unmanned Aircraft Systems (sUAS). By way of background, TTD consists of 32 affiliate unions that represent transportation workers, including aviation crewmembers who operate in the National Airspace System (NAS) and the air traffic controllers (ATC) who safely separate NAS air traffic.¹ We therefore have a vested interest in this proceeding. In addition to our comments below, we endorse those filed by an affiliate, the Air Line Pilots Association.

Under this NPRM, FAA creates new 14 CFR part 107 to regulate the operation of non-recreational small unmanned aircraft systems (sUAS) in the NAS; the certification of sUAS operators; and the requirements of the small unmanned aircrafts. Finding that sUAS are capable of safely operating in the NAS, FAA proposes this rulemaking in accordance with the FAA Modernization and Reform Act of 2012 and begins the integration of small commercial UAS into our nation's airspace.

¹ A complete list of TTD affiliate unions is attached.

Transportation Trades Department, AFL-CIO

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Edward Wytkind, President / Larry I. Willis, Secretary-Treasurer



The integration of sUAS presents an entirely new concept and one that must be implemented in a responsible and safety focused manner. While the potential commercial applications of sUAS have garnered much public attention, TTD continues its call for strong regulations that balance the potential economic value of sUAS and the absolute necessity of maintaining the existing high level of safety of the NAS.² We are pleased that FAA has issued a proposal to begin its work of implementing a framework for the operation of commercial sUAS. To strengthen this proposal and ensure one level of safety, TTD urges FAA to address the provisions as indicated below.

Defining sUAS Operator

FAA proposes to use the term ‘operator’ to identify the “person who manipulates the flight controls of a small unmanned aircraft system.” We oppose using the term ‘operator’ to describe the person controlling a sUAS. Instead, FAA should identify this individual as a ‘pilot’ who has Pilot in Command authority.

We believe the NPRM’s use of operator would cause confusion with the current and common use of that term as defined at 14 CFR 1.1. At present, operator refers to an air carrier or the owner of an aircraft, not the individual operating aircraft controls. Moreover, proposed 107.19 assigns to the individual operating sUAS controls the final authority and direct responsibility for the operation of the system, both of which are required of the Pilot in Command as defined in 14 CFR 1.1.

We recognize the inherent differences in the operation of sUAS and manned aircraft. But as explained below, the NPRM makes it possible for sUAS to occupy the same airspace as manned commercial flights, and it is also possible that these pilots may inadvertently direct their unmanned aircraft into an airspace that they are not permitted to occupy. As such, sUAS pilots must fully understand the requirements and responsibilities of pilots of commercial manned aircraft in order to anticipate that pilot’s response and avoid collisions. Accordingly, sUAS pilots should hold and complete comparable certification and training as traditional commercial pilots.

Operator Certification

We oppose the proposal that sUAS pilots obtain an unmanned aircraft operator certificate with a sUAS rating. As noted above, we believe that the new standards FAA puts in place must ensure one level of safety for all who operate in the NAS. To achieve this goal, sUAS pilots must be held to an equivalent level of training, qualification, and certification requirements as currently required of aircraft pilots. We agree with the agency that a sUAS pilot must maintain an airman certificate; however, given that this rule governs the use of sUAS for compensation and hire purposes and that it proposes to allow sUAS to share airspace with manned aircraft, pilots of these unmanned systems should hold at least a Commercial Pilot Certificate and thus also be a minimum of 18 years old.

² Attached is the policy statement adopted by TTD’s Executive Committee in February 2015, “Commercial Application of Drones Must be Slowed until FAA Safety Regulations are Implemented.”

Medical Certification

Similarly, we oppose FAA's plans not to require sUAS pilots to maintain medical certification. Current 14 CFR Part 61 requires those operating with a Commercial Pilot Certificate to maintain a second-class FAA medical certificate. As such, FAA should extend this requirement to sUAS pilots who intend to operate the aircraft for commercial purposes.

We recognize the value of the proposal in 107.61 and 107.63 to require sUAS pilots to attest that they do not know or have reason to know that they have a physical or mental condition that would interfere with the safe operation of their sUAS. But, we question whether these operators would know which conditions may degrade safety, and we ultimately believe professionals trained to perform medical exams should be responsible for certifying that sUAS pilots are fit to operate.

Operator Training and Testing

We agree with FAA that testing to ensure an applicant has sufficient aeronautical knowledge to safely operate a sUAS in the NAS is critical to upholding safety. We support testing on the knowledge of weather effects, airport operations and radio communication procedures, and sUAS flight restrictions, among other specified testing elements. And we endorse the requirement for recurrent knowledge testing.

However, we oppose FAA's plan not to require training, experience, or skills testing prior to certification or thereafter. Without these requirements, it is possible that a sUAS pilot could obtain and maintain certification without any real experience or ever demonstrating that her/his operating skills are, or have remained, proficient. Aircraft pilots are required to complete training, obtain hours of experience, and pass skills test for initial certification and periodically thereafter. Similar requirements should be applied to sUAS pilots.

Visual Observers

We support the use of a visual observer (VO) and recommend that every sUAS operation include one pilot and at least one qualified VO working together to operate a single sUAS at a time. As FAA describes, there will be moments when a pilot must momentarily look away from the sUAS to scan the airspace, watch for moving people, or look at aircraft controls. VOs' assistance in these moments and throughout the operation will benefit pilots' ability to see and avoid air traffic and other objects and reduce the need to use emergency maneuvers to avoid collisions.

Given VOs role in the safe operation of a sUAS, we request FAA to issue guidance indicating the training VOs should complete. We also encourage the agency to clarify the requirement at 107.33(d)(2) that operators and VOs "maintain awareness of the position of the small unmanned aircraft through *direct visual observation*" (emphasis added). FAA briefly describes in the preamble that it would be permissible for one's line of sight to be temporarily obstructed by an object. The agency should clarify when and to what degree obstruction of one's visual observation is permitted under the rule.

Additionally, FAA explains, the vision of VOs (as well as pilots) must be sufficient to enable the individual to know the location of a sUAS, observe air traffic and hazards, and be able to determine the aircraft's altitude, attitude, and direction, and whether the operation endangers life or property. But without any requirement to display skill proficiency or determine vision quality, neither the VO, pilot, nor FAA can be sure one's vision can be relied upon. We request FAA to address this concern.

Airspace Operation Restrictions, Requirements of sUAS

We believe that standards and technologies for sUAS must be in place and sufficient data must be collected before consideration is given to allowing sUAS to occupy the same space as commercial aircraft or to operate in areas where sUAS might inadvertently stray into airspace used by commercial flights. The very need for this proceeding demonstrates that the integration of sUAS into the NAS is an entirely new concept and thus sufficient data on potential safety implications of their integration is not yet available.

Despite this, FAA proposes to permit sUAS operations in Class B, C, D, and E airspace if the pilot obtains prior authorization from the ATC facility that has jurisdiction over the airspace. Additionally, FAA does not propose sUAS design requirements that limit altitude or avoid geographic features – technology that could prove critical if the aircraft-pilot communication connection becomes lost. In effect, an approved sUAS could share airspace with commercial aircraft transporting passengers and/or cargo without any required technology to limit its flight if communication is lost.

Accordingly, we oppose permitting sUAS to operate in Class B, C, D, and E airspace altogether, and we strongly urge the agency to adopt design provisions that ensure sUAS remain in the intended airspace when operating optimally as well risk mitigation technology when command controls are lost.³ Doing so eliminates unnecessary and avoidable risks until information on sUAS operating capabilities and performance is collected. We also question whether the limited testing requirement for an 'operator' as envisioned by this NPRM would make the individual capable of effectively communicating with ATC, identifying and avoiding classified airspace, and measuring the altitude of the sUAS. Without these skills, the need for restricted operations and design provisions are ever more important.

Hobbyists

We are pleased with FAA's recognition that model aircraft (sUAS flown for hobby or recreational purposes) are subject to some level of FAA oversight. By adding model aircraft to 14 CFR part 101, FAA asserts its authority to pursue enforcement action against hobbyists flying sUAS in ways that endanger NAS safety. However, the recreational use of sUAS remain outside the scope of the new part 107 regulations established by this NPRM. While we support FAA formalizing its authority to enforce the safety of the NAS, more must be done to regulate the operation of recreational sUAS.

³ This technology is already available and being voluntarily adopted by some UAS manufacturers.

The U.S. aviation system is the safest in the world. We can maintain this high level of safety while integrating commercial sUAS if we enact thoughtful and strong safety standards. TTD reiterates our commitment to ensuring one level of safety that holds all operators in the NAS to an equivalent level of responsibility. We appreciate the opportunity to comment on this important proceeding, and we request the issues raised above be given due consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Edward Wytkind', with a large, stylized flourish at the end.

Edward Wytkind
President



Transportation Trades Department, AFL-CIO
A bold voice for transportation workers

TTD MEMBER UNIONS

Air Line Pilots Association (**ALPA**)
Amalgamated Transit Union (**ATU**)
American Federation of Government Employees (**AFGE**)
American Federation of State, County and Municipal Employees (**AFSCME**)
American Federation of Teachers (**AFT**)
Association of Flight Attendants-CWA (**AFA-CWA**)
American Train Dispatchers Association (**ATDA**)
Brotherhood of Railroad Signalmen (**BRS**)
Communications Workers of America (**CWA**)
International Association of Fire Fighters (**IAFF**)
International Association of Machinists and Aerospace Workers (**IAM**)
International Brotherhood of Boilermakers, Iron Ship Builders,
Blacksmiths, Forgers and Helpers (**IBB**)
International Brotherhood of Electrical Workers (**IBEW**)
International Longshoremen's Association (**ILA**)
International Organization of Masters, Mates & Pilots, ILA (**MM&P**)
International Union of Operating Engineers (**IUOE**)
Laborers' International Union of North America (**LIUNA**)
Marine Engineers' Beneficial Association (**MEBA**)
National Air Traffic Controllers Association (**NATCA**)
National Association of Letter Carriers (**NALC**)
National Conference of Firemen and Oilers, SEIU (**NCFO, SEIU**)
National Federation of Public and Private Employees (**NFOPAPE**)
Office and Professional Employees International Union (**OPEIU**)
Professional Aviation Safety Specialists (**PASS**)
Sailors' Union of the Pacific (**SUP**)
Sheet Metal, Air, Rail and Transportation Workers (**SMART**)
SMART-Transportation Division
Transportation Communications Union/ IAM (**TCU**)
Transport Workers Union of America (**TWU**)
UNITE HERE!
United Mine Workers of America (**UMWA**)
United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service
Workers International Union (**USW**)

These 32 labor organizations are members of and represented by the TTD





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ATTACHMENT 2

COMMERCIAL APPLICATION OF DRONES MUST BE SLOWED UNTIL FAA SAFETY REGULATIONS ARE IMPLEMENTED

The integration of Unmanned Aircraft Systems (UAS), or “drones,” into our nation’s airspace has received much attention in recent months. Striking the right balance between the absolute necessity of maintaining existing safety levels in the National Airspace System (NAS), the potential value of UAS to the economy, and the need for regulations that encompass the spectrum of UAS operations, is a monumental challenge. The widespread commercial application of drones must not be permitted until the U.S. government establishes clear and enforceable operating standards that will ensure safe integration into the NAS.

The much-publicized use of drones in combat operations has created what many believe will be a large market for the use of UAS by commercial enterprises. As the number and variety of UAS increase, along with their potential for use in business, so does pressure to allow their unrestricted access to and operation in the NAS. However, the introduction of such “unmanned” or “remotely piloted” aircraft into an integrated NAS represents an entirely new concept that could profoundly degrade the safety of commercial and general aviation flight operations if this integration is not accomplished in a responsible, safety focused, and comprehensive manner. Simply because Amazon’s CEO is in a hurry to fill our skies with the company’s “Prime Air vehicles” is not a good reason to hastily open the floodgates to commercial drone use in our NAS.

When the last Federal Aviation Administration (FAA) Reauthorization Act was passed into law in 2012, it included a section requiring the FAA to develop a comprehensive plan for integration of UAS into the NAS by December 31, 2014, and to finalize that plan by September 2015. On February 15, 2015 – two and a half years after the law was passed – the FAA released a long-awaited proposed rule regulating the introduction of small UAS into the NAS for commercial use. This proposal seeks to address many of the safety and security concerns that we have, but still leaves some questions unanswered. The rule also must go through an extensive public notice and comment period that will surely draw calls from special interests for the rapid expansion of the use of UAS for commercial purposes. Transportation labor will participate fully in the rulemaking process to ensure that the final rule requires that drone operations meet all of the standards imposed on all those who currently use the NAS. This means UAS must be designed with similar performance and functional requirements as required by currently certified commercial and general aviation airspace users depending on mission.

The delayed timetable for this rulemaking has already resulted in mounting pressure by the UAS industry to gain access to the NAS for commercial applications. Hundreds of petitions for exemption under the law have been received by the FAA to perform operations in areas like film making, environmental surveying, infrastructure inspection, 3-dimensional map making, and

agriculture applications. Until the FAA promulgates a comprehensive final rule, however, no unmanned or remotely piloted aircraft, whether for public, commercial, or hobby use, should be allowed unrestricted access to conduct flight operations into the NAS.

To ensure the safety of passengers and crewmembers, current aircraft operators using the NAS need to be able to see and avoid UAS operating in the same area. The same is true for air traffic controllers who are responsible for safely separating air traffic within the NAS. Additionally, those approved to operate UAS for commercial purposes in the NAS must meet all the certification and fitness standards required of air carriers, and the pilots flying drones must meet an equivalent level of training, qualification, and licensing requirements applicable to aircraft pilots operating in the same airspace flying the same mission. Those who might object to the FAA's imposition of these requirements should be forced to explain to the public why our already complicated and highly congested airspace should be occupied by unqualified and unsafe drone operators.

While the potential commercial opportunities for UAS are broad, it is vital that the FAA's rulemaking be carefully considered and be primarily geared toward ensuring the safety of the millions of passengers and crew who fly in the NAS every day. Though special interest groups have put pressure on the FAA to rapidly introduce UAS to the airspace, the agency must be sure to avoid hastily or carelessly promulgating a rulemaking. Standards and technologies for UAS must be in place to ensure that we maintain the current high level of safety in the NAS before drones are authorized to occupy the same airspace as airlines or to operate in areas where UAS might inadvertently stray into airspace used by commercial flights. Additionally, if drones are not intended to operate in airspace occupied by manned aircraft, then UAS must be equipped with altitude-limiting and geographic-avoidance features. This technology is available and is even being voluntarily adopted by some UAS manufacturers. While many UAS have preprogrammed instructions upon which they rely on in the event that they lose connection with their operator, an unmanned aircraft that is not being directly controlled would be a serious safety concern if this occurred near airspace occupied by other conventionally piloted aircraft. Any FAA rulemaking must adequately address this and other potential safety concerns.

Transportation labor cannot endorse the commercial application of drones until the necessary FAA safety standards are in place ensuring one level of safety for any type of aircraft or operator that seek permission to fly in America's airspace. If properly regulated with strong safety standards in effect, the safe integration of commercial drones is possible.

Policy Statement No. W15-02
Adopted February 22, 2015