

# HSAC UAS Workgroup – Houston – 18 January 2023



# HSAC ANTI TRUST STATEMENT



The Sherman Act and the Clayton Act are federal statutes which make certain agreements in restraint trade illegal. Violators can be subject to criminal penalties and large monetary damages.

The purpose of antitrust policies is to **restrict communications concerning cost, production or other trade sensitive information which could be the foundation for such illegal agreements.**

# Antitrust Checklist



We should always....

- **Not** discuss competitive cost, production, market analysis or other competitive trade sensitive data
- **Have** an agenda
- **Report** to our own counsel any concerns that we have of variation from the agenda
- **Keep** minutes for a record of our discussions

# HSAC ANTI TRUST STATEMENT



## ❖ Trade Associations / Industry Groups

Trade associations are generally recognized as a legitimate forum for competitors to share ideas which promote the efficiency of the industry.

### Example:

- How to do things safer, better, more efficiently.
- However, any discussion which involves the use of cost information (even historical) or other competitive information should not take place without specific authorization of antitrust counsel.

**HSAC Unmanned Aircraft Systems**  
Working Group Agenda  
18 January 2023  
Houston



- Housekeeping and Introductions
- Safety Moment – Todd Chase
- FAA BVLOS Presentation – Thomas Beatty, UAS Integration Office
- BVLOS Standards – Todd Chase
- RP 15-1 Discussion – Pat Niven
- General Discussion



**RPAS engine failure during  
flight, Nigeria,  
Oct 3, 2022**

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- Fixed Wing (VTOL) Beyond Visual Line of Sight (BVLOS) system (<25kg MTOW) conducting an aerial surveillance patrol of a pipeline. (\$400k aircraft)
- During the flight, the main engine failed, and the remote crew selected an alternate landing site and commanded the RPA to land.
- During the glide to the alternate landing site and the resulting loss in altitude, the primary and secondary Command and Control (C2) radio links lost comm with the Ground Control Station (GCS).
- The LL triggered the Return To Home (RTH) logic of the autopilot and the RPA changed track back towards the launch site, over 40km away.
- The RPA did not have the altitude to glide back to the launch site and landed in a nearby river. The RPA has not been recovered.



This propulsion module, like all other internal combustion engines, by its design, is a subject to sudden stoppage due to a variety of reasons. Engine stoppage can result in emergency landings, including forced landings, no-power landings and crash. As such landings can lead to serious consequences, never fly the aircraft equipped with this propulsion module at circumstances (including locations, airspeeds, altitudes and other) from which a successful emergency landing cannot be made after a sudden engine stoppage.

This is not a certified aircraft engine and conforms to no aircraft standards. It is intended for use only in vehicles in which an engine failure will not compromise safety. User assumes all risk of use and acknowledges by his use that he knows this engine is subject to sudden stall.



**Shell Aircraft conducted an investigation into the incident and the following recommendations were developed for BVLOS operations and are shared as part of a safety notice;**

- Confirm OEM engine reliability of any two stroke engines used in the RPA;
- Ensure abnormal procedures are regularly rehearsed by the remote crew;
- Ensure that the remote crew fully understand the RTH functionality of the autopilot software;
- Confirm with the autopilot software OEM that a RTH bypass is available if required;
- Ensure all required rally points for alternate landing sites are loaded into the flight plan prior to the mission start;
- Ensure only mission critical information is presented on the remote pilot station and standardize the display requirements;
- Confirm if audible and visual alarms are available on remote pilot station for emergency issues;
- Confirm availability of low altitude C2 connectivity for landing at alternate landing sites;
- GCS remote pilot to have a dedicated display and
- Observe the Shell fatigue management limitations.



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Helicopter Safety Advisory Conference

**Thomas Beatty, AUS-410**

January, 2023



# Successes to date:

BVLOS Waivers for inspections awarded to:

Accomplishments:

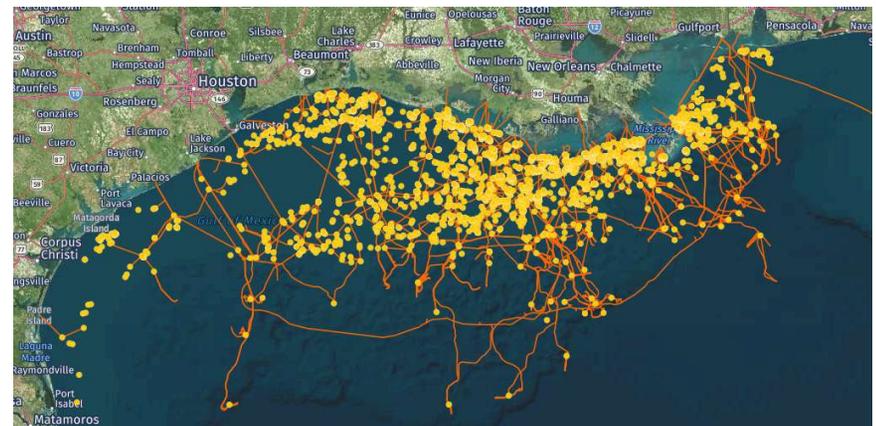
- > 50K miles inspected
- > 2k Hours BVLOS
- > 3K Hours VLOS
- > 150K flights
- Operations in over 30 States
- Helping shape future of BVLOS operations
- Addressing critical response requirements
  - Wildfire prevention/ Operations
  - Weather Events/Coordination



Federal Aviation  
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# Operations over the High Seas

- Received queries from, and replied to Congress
  - FAA understands the importance to industry and are working on short & long term resolutions
  - Ongoing meetings with ICAO
- FAA Position on ops beyond 12NM
  - Currently does not have the authority to approve operations beyond 12 NM
  - Required to enforce and prosecute those in violation
    - Per the Chicago Convention of 1944
- Discussions are ongoing...



# Working together to achieve your operational objectives

- Industry & Government solutions
- Safeguarding crews
- Augmenting operations
  - Hazardous operations
  - High level of detail inspections
- Understanding your challenges
- Opportunities for modernization



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