



**NTSB** National Transportation Safety Board

*Office of Aviation Safety*

## **Customs and Border Protection**

## **Predator B Accident**

Nogales, Arizona

April 25, 2006



# CBP Safety Issue Areas

- UAS equipment design and maintenance
- Operational plan
- Safety risk management

# Certificate of Authorization (COA)

- Authorized CBP UA flights
- Effective April 2006
- Defined terms and operating limitations for CBP UAS operation

# FAA Safety Issue Areas

- Air traffic management
- Monitoring and analyzing UA operations

# Public Use Operator (CBP)

- Establishing aircraft airworthiness
- Developing maintenance plans
- Qualifying/training pilots
- Operational program procedures
- Oversight of operation

# CBP Equipment Safety Issues

- Lockups increase workload and reduce safety margins
- Design vulnerable to inadvertent engine shutdown
- Inconspicuous warnings/alerts to pilots

# CBP Equipment Safety Issues

- Loss of transponder in flight
- Engine restart not possible in lost link mode
- Undocumented maintenance program
- Ineffective oversight of maintenance plan

# CBP Operational Safety Issues

- Safety risk of lost link flightpath not understood
- Pilots unaware of actual lost link flightpath
- Pilot training for emergency operations
- Changes not coordinated with ATC



# CBP Other Safety Issues

- Safety requirements may be missing or ineffective
- Incomplete evaluation of communications

# FAA Safety Issues

- ATC unaware of UA location during emergency
- ATC unfamiliar with CBP lost link emergency plans
- UA emergency not handled under standard ATC procedures
- Lack of tracking and analyzing UA operations for safety assurance



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