

EMERGING RISKS: THE CYBER-PHYSICAL DRONE THREAT

DEFEND TODAY, SECURE TOMORROW





Threat Actors

Careless &Clueless

- Overwhelming majority in U.S.
- Operate Common Commercial Off The Shelf (COTS) multi-rotor platforms
- Unintentionally or unknowingly violate flight restrictions or fly unsafely
- Effective detection and tracking by most radio frequency sensors when present
- Operators likely not trying to avoid detection or intervention
 from LE



Intentional & Criminal

- May modify the COTS drones to carry/drop payloads
- Often conduct planned operations with intent to evade detection.
- Drone modifications may make detection, tracking, and identifying the operator difficult



- May modify the COTS drones during guerilla warfare
- Detection, tracking, and mitigation are made difficult due to modifications

Tactics



Smuggling

Disruption

Weaponization

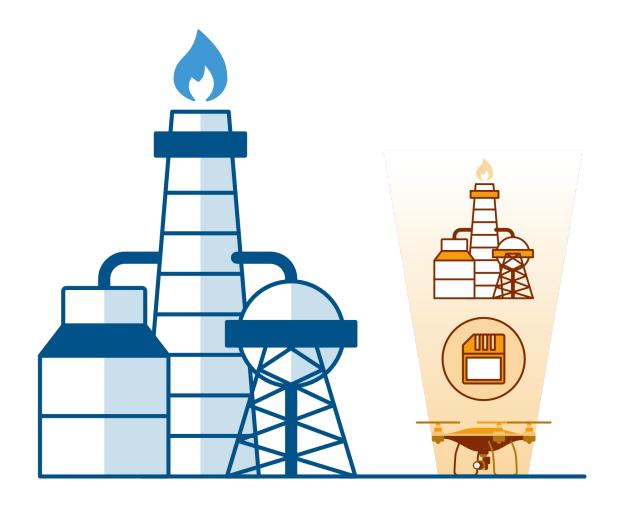
Surveillance/Reconnaissance

Cyber





Chemical Sector Incidents



October 2018 - September 2020: 235 pre-operational incidents were reported at or near domestic chemical facilities in Louisiana.

December 2019: A chemical plant in New Jersey found a grounded drone with a memory card containing footage of the facility.

April 2021: A "fairly-large" drone was observed by a Pennsylvania facility employee around the Liquid Propane farm, then flew across the Plant about 20-30 feet above the ground.





Security Measures



- ☐ Know the airspace, flight restrictions, and who has authority to take action.
- ☐ Consider using detection technology to enhance awareness of the airspace above facilities.
- Use "No Drone Zone" signage.
- Update security plans to incorporate drone response actions.
- Provide training and conduct exercises on recognizing suspicious indicators and responding to drone incursions.
- Establish render safe and handling procedures in the case of a crashed drone.
- Build strong partnerships between federal, state, and local law enforcement, recreational drone user groups, and critical infrastructure owners and operators in the area.
- Connect with a Protective Security Advisor (PSA) and conduct a site survey of the venue and surrounding area. Take note of critical assets, nearby property types, potential drone launch points, and options for positioning detection equipment.





Domestic C-UAS National Action Plan (NAP)

The Domestic C-UAS NAP proposes eight key recommendations to include legislative action to address shortfalls in existing authorities.





Work with Congress to reauthorize and expand existing C-UAS authorities.





Establish a list of U.S. government authorized detection equipment.





Establish oversight mechanisms for
purchasing C-UAS
equipment.





Establish a C-UAS training center.





Create a Federal UAS incident tracking database.





to coordinate research, development, testing, and evaluation.





Work with
Congress to enact a
comprehensive criminal
statute.





Enhance cooperation with the international community.





For more information: cisa.gov/uas-critical-infrastructure

Questions?

sUAS Security

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