

Mutual Aid Box Alarm Systems**Unmanned Aircraft Systems Program (UAS)****UAS Operational Application Guidelines – Hazardous Materials Response**

PURPOSE

The purpose of this document is to provide guidelines on operating a UAS at a hazardous materials response incident. These guidelines shall coincide with the MABAS-IL UAS Flight Operations and Deployment Policy and Operational Application Guidelines – General document, and shall not supersede the AHJ. The document will be broken down into various tasks. A specific operation may use one or many of these tasks.

SCOPE

The document will offer non-compulsory guidance to facilitate the safe and successful completion of a number of objectives in the safe and effective deployment of UAS assets. Many of these tasks may need to be completed over a series of flights, dependent on the nature of the incident and number of units responding.

OPERATIONAL TASKS

At hazardous material response incidents, the primary focus of a UAS will be to collect data, so the Incident Command (IC) can identify and mitigate hazardous situations. The following is a list of guidelines that could be used during a hazardous materials response incident.

- Define landing zone in the warm zone.
- Designate the return to home point as the warm landing zone. This prevents contamination of the cold zone in the event of an auto return to home.
- Always wear proper PPE when entering the warm or hot zones.
- Decontaminate the aircraft in a method consistent with the present hazard, and the specifications/ingress protection of the aircraft.
- If any equipment enters the warm zone, it must be decontaminated before coming back into the cold zone. This includes batteries, controllers, aircraft, sensors, etc.
- Assume any aircraft flown into a warm or hot zone may be total loss due to hazmat exposure.
- Consider directly recording the live streamed data from any aircraft that may be flown into a hazardous environment, as recovering the footage directly may not be possible.
- When possible, maintain appropriate standoff distance in the cold zone by utilizing a zoomable sensor.

DECONTAMINATION TASKS

After a hazardous materials incident, it may be necessary to decontaminate the UAS and determine its airworthiness. The following guidelines should be followed:

- Consult with Hazmat Operations Team to understand decontamination procedures for the particular substance and whether the substance can have permanent effects on electronics or mechanical components.
- Place the aircraft in a sealed container with indicator tape for 24 hours to validate that the materials are no longer a hazard.
- Perform a full maintenance inspection of the aircraft when returning it to service. An aircraft may be taken out of service indefinitely due to contamination.
- Use extreme caution when returning an aircraft to service that may have come into contact with corrosives or oxidizers.