## Description: nasa_meatball

## Stennis Space Center

## Small Unmanned Aerial System (sUAS) Questionnaire Form

|  |
| --- |
| **Instructions:**Please answer all questions completely. Areas that do not apply or are “to be determined”, please indicate with N/A (Not Applicable) or TBD (To Be Determined). This questionnaire is designed to describe a single UAS type and block of vehicle. Any subsequent system blocks/upgrades/changes will require completion of a new questionnaire for safety review. ***Note:*** *\* Indicates a mandatory field* |

**\* 1. Project Name and Agency/Company:**

**\* 2. sUAS Name/ID number if multiple vehicles:**

**\* 3. Program Classification (check all that apply):**

[ ]  Unclassified

[ ]  Company Proprietary

[ ]  Classified (explain classification level and company non-disclosure requirements below):

**\* 4. Vehicle Description & Performance:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Wing Span:** | **Length:** | **Empty Weight:** | **Gross Weight:** |
| **Engine (size/rating):** | **Fuel Type/Qty:** | **Payload Capacity:** | **Glide Ratio:** |
| **Max Speed:** | **Cruise Speed:** | **Stall Speed:** | **Glide Speed:** |
| **Rate of Climb:** | **Rate of Descent:** | **Max Altitude:** | **Max Range:** |
| **Construction:** | **Wing Loading:** | **Max Duration:** |  |

**\* 5. Photo or drawing of sUAS vehicle (flight article)**

Figure

**\* 6. Concept of Operations:**

***Describe intended sUAS operations to include, but not limited to: typical crew complement, preflight activities, launch/recovery details, typical mission profile, payload operations (video camera, typical maneuvers, releasable objects), & post-flight activities.***

**\* 7. Program Schedule:**

***Describe intended flight operations schedule to include desired project start date, projected completion date and any additional dates necessary to accomplish project objectives.***

**\* 8. System Description:**

**Radio Frequency Requirements:**

***Describe RF transmitters to include frequency, bandwidth and power (attach DD-1494, if applicable).***

|  |  |
| --- | --- |
| **R/C Controller (Freq/Power/Manufac):**   | **Video Transmitter (Freq/BW/Power):**  |
| **Transmitter Serial Number(s):** | **Sensor/Payload (Freq/BW/Power):** |
| **Frequency Agility (fixed, tunable, spread):**  | **FCC ID/JF12 (Annotate Per Transmitter):** |
| **Flight Termination System (if applicable):**  | **Describe any additional RF devices/requirements:**  |
| **Receiver/Transmitter/Transceiver** | **Antenna Manf/Gain (dB)/Type/Polarization** |

**Autopilot System:**

***Describe system type, manufacturer, model, serial number, software or hardware modifications, performance capabilities and limitations in detail.***

**Payload and/or Video System:**

***Describe payload and/or video system in detail. If the payload is a sensor, describe the sensor characteristics/performance capabilities (operating spectrum, resolution, zoom, analog/digital, etc.).***

**Ground Control Station (GCS):**

***Describe equipment, system capabilities, simulator, performance (limitations).***

**Vehicle Launch/Recovery System:**

***Describe launch/recovery methodology.***

**Aircraft Recovery:**

**Flight Termination System:**

***Describe equipment type, configuration, time-out sequence, etc., in detail.***

***Note:***

**\* 9. Describe Type(s) of Activity (check all that apply):**

|  |  |  |
| --- | --- | --- |
| [ ]  Acceptance Flight Test[ ]  Aero-Elastic/Flutter Stability[ ]  Airborne Science[ ]  Avionics/Systems Capabilities[ ]  Combined System Test[ ]  Communications[ ]  Data Link/C2[ ]  Design[ ]  Engine Performance[ ]  Emergency Procedures[ ]  EMI[ ]  Envelope Expansion[ ]  Environmental Factors[ ]  EO Video/Camera | [ ]  FAA Certification[ ]  Flight Controls[ ]  Flight Plan/Navigation[ ]  Flight Termination System[ ]  Functional Check Flight[ ]  Ground Equipment (GCS)[ ]  Ground Operations[ ]  Guidance Systems[ ]  Handling Qualities[ ]  Instrumentation[ ]  Launch/Recovery System[ ]  Operational Test & Evaluation[ ]  Payloads[ ]  Payload Drop | [ ]  Performance[ ]  Radar/IR Signature[ ]  Radio Frequency Interference[ ]  Research & Development[ ]  Sensors[ ]  Structural Loads[ ]  Software[ ]  Taxi[ ]  Test & Verification[ ]  Test Article[ ]  Test Facility[ ]  Tow[ ]  Training[ ] Other (explain in remarks) |

**\* 10. Operational Requirements:**

**Weather Minimums:**

|  |  |
| --- | --- |
| **Meteorological Conditions:** | **Wind Limits (HW/TW/CW):** |
| **Ceiling & Visibility:** | **Environmental Limitations:** |

**Range Requirements:**

***Describe any test site operational requirements and/or limitations in detail.***

**Crew Training:**

***Describe crew qualifications, minimum crew size, currencies, etc., in detail.***

**Pilot Qualifications:**

**Observer Qualifications:**

**Ground Observer and/or Chase Aircraft Requirements:**

***Describe ground observer requirements, qualification and training and/or chase aircraft requirements (aircraft type, chase procedures, times required) in detail.***

**Host Support Requirements:**

***Describe desired support requirements from SSC and KSC.***

**\* 11. Risk Management:**

 **COTS equipment modifications:**

***Describe any modifications to COTS systems, why modified, and possible new failure modes. If no modifications, mark as “N/A”.***

**Test Hazard Analysis:**

***Describe system safety methodology, risk analysis and fault tree analysis in detail.***

**Loss of Control Safeguards:**

***Describe procedures for the following conditions: loss of system C2 link, loss of position/sight, unresponsive flight controls, loss of propulsion, loss of electrical power and ground control station failure in detail.***

**Pre-Mishap Plan:**

***Describe in detail what actions the team will take in the event of an aircraft mishap (include the pre-mishap plan as an attachment).***

**Vehicle Safety History & Reliability:**

***Describe safety record of system (include number of hours or sorties flown, mishaps, engine failures (MTBF), C2 anomalies, critical flight components, etc.).***

**Avoidance of Risk of Collision with Other Aircraft:**

**Mitigation Step:**

**Mitigation Step:**

**Emergency Procedures:**

**\* 12. Describe Hazardous Materials/Equipment (check all that apply):**

|  |  |
| --- | --- |
| [ ]  Batteries/Uninterrupted Power Supply (UPS)[ ]  Chemicals (solids & liquids)[ ]  Compressed Gasses[ ]  Cryogens[ ]  Heaters[ ]  Lasers[ ]  Motors/Pumps | [ ]  Power Distribution Equipment[ ]  Pressure Vessels[ ]  Propellant (fuel)[ ]  Radioactive Materials[ ]  Radio Frequency Emitters[ ]  Releasable Payload[ ]  Other |

***Describe in detail any checked item above (add diagrams, specifications, MSDS, etc.).***

**\* 13. Project Manager (or Designated POC) Information:**

|  |  |
| --- | --- |
| **Name:** | **Submittal Date:** |
| **Organization:** | **Address:** |
| **Phone Number:** | **E-Mail Address:** |
| **Mobile Number:** | **Fax Number:** |

***Note***

**14. Submit completed form to:**

**Jason Peterson**

**Jason.e.peterson@nasa.gov**

**228-688-1257**