## 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**](mailto:Jason.e.peterson@nasa.gov)

**228-688-1257**