AFWERX · SPACEWERX

Regulatory Compliance Initial Safety Assessment

For 24.7 Phase II, 24.E Phase II, & 25.5 Release 8 D2P2

Purpose & Instructions: All SBIR/STTR Phase II applicants are required to submit information for an initial safety assessment to ensure that any work or research conducted aligns with federal safety regulations and standards. This assessment ensures that each funded SBIR/STTR effort complies with all relevant safety regulations and guidelines.

Completing the following questions carefully and thoroughly will also reduce likelihood of disruptions or delays in contract award in the event your proposal is selected for funding. And, ultimately, your collaboration will help us foster a culture of safety and ensure that all projects proceed with appropriate precautions in place!

Proposal #: _____

Deliverables: Provide information on the types of deliverables being proposed.

1. What are the deliverables for this activity? Please explain all deliverables.
   - ☐ Hardware _____
   - ☐ Software _____
   - ☐ Data Only _____
   - ☐ No deliverables
   - ☐ Unknown at this time

Equipment: Identify if any government owned equipment will be used.

2. Will any government owned equipment be used for this activity? Explain equipment used.
   - ☐ Yes _____
   - ☐ No, exclusively contractor owned equipment will be used
   - ☐ Unknown at this time

Performer: Identify the types of parties that will be part of this effort.

3. Who will perform this activity? (Check all that apply)
   - ☐ Government (military or civilian)
   - ☐ Contractor
   - ☐ Other _____
   - ☐ Unknown at this time

Performer Location: Provide information about where the research activities will occur.
Note: Do not include non-research aspects, such as meetings or reviews.

4. Where will this activity occur? (Check all that apply)
   - ☐ Government owned facilities (Specify base and/or building name if applicable)
     _____
   - ☐ Contractor owned facilities (Specify contractor and facility)
     _____
   - ☐ Military owned ranges (Specify military owned range)
     _____
   - ☐ Other National Airspace OCONUS Other (specify)
     _____
   - ☐ Unknown at this time

5. Will this activity occur indoor or outdoor? (Check all that apply)
   - ☐ Indoor (lab)
   - ☐ Outdoor (field)
   - ☐ Outdoor in an outdoor lab (field)
   - ☐ Unknown at this time

6. Will this activity regularly utilize an existing AFRL lab?
   - ☐ Yes (specify lab(s)) _____
   - ☐ No
   - ☐ Unknown at this time

Test Lead: Identify if AFRL will be the lead testing organization.

7. Will AFRL be the lead testing organization for all efforts executed as part of this activity?
   - ☐ Yes
   - ☐ No
   - ☐ Unknown at this time

Related Work: Identify if this proposal is part of a larger planned effort.

8. Is this an extension of a previous program or work unit? (Please indicate if this is a follow-on to a Phase I SBIR/STTR contract)
   - ☐ Yes (Specify) _____
   - ☐ No

9. Will this work unit have a follow on effort not covered under this form?
   - ☐ Yes (Briefly describe scope of effort in phases in notes)

     _____
   - ☐ No
   - ☐ Unknown at this time

Standard Operating Procedures (SOPs): Identify if this activity will fall under a SOP that has been approved by the local AFRL Det/SE office. If yes, provide more information.

10. Will this activity fall under approved Standard Operating Procedures (SOP(s))?
    - ☐ Yes (Specify SOP(s)) _____
    - ☐ No
    - ☐ Unknown at this time

Space Activity: Identify if this activity involves space activities. *Note: Space Systems include all the devices and organizations forming the space network. These consist of launch vehicles, launch ranges, launch and range support equipment and systems, spacecraft, mission, and user terminals (See AFI 91-202).*

11. Will this activity involve developing, testing, or operating a system that will be in space during this contract?
    - ☐ Yes (Specify which milestone(s)) _____
    - ☐ No
    - ☐ Unknown at this time

12. Will this activity involve developing or producing hardware, software, or systems that affect spaceflight control?
    - ☐ Yes (Please explain) _____
    - ☐ No
    - ☐ Unknown at this time

13. If the answer to Question 12 is yes, will the government have control over the hardware, software, or system during spaceflight? (Mark N/A if above question is no)
    - ☐ Yes (Please explain) _____
    - ☐ No
    - ☐ Unknown at this time
    - ☐ N/A

Flight Activity: Identify if this activity involves flight activities. **If you answer yes to any of these questions, you will also need to complete the Flight Activity Information Worksheet** (attached).

Note: Flight is any set of related events where a vehicle moves through the air making use of the physics of controlled or maneuvering aerial transport. Includes balloon flight, but does not include activities where the flight path is solely ballistic in nature. (See AFRL 61-103 Vol 1).

14. Will this activity include any flight? If yes, please complete the Flight Activity Information Worksheet (Attached)

☐ Yes (Specify which milestone(s)) _____
☐ No

15. Will this activity NOT include flight but WILL include taxiing an aircraft (manned or unmanned)? If yes, please complete the Flight Activity Information Worksheet (Attached)

☐ Yes (Specify which milestone(s)) _____
☐ No

16. Will this activity include flight inside an enclosed facility? (Outdoor netted facility, indoor flight testing, etc.) If yes, please complete the Flight Activity Information Worksheet (Attached)

☐ Yes (Specify which milestone(s)) _____
☐ No

Hazardous Material(s): Answer the questions below about hazardous materials. Additional information is provided below:

Directed Energy*: technologies that relate to the production of a beam or field of concentrated acoustic or electromagnetic energy or atomic or subatomic particles. (See AFI 91-401)*
Ammunition*: any munition designed to be thrust from a gun barrel by expanding gasses resulting from burning propellant (See DSER 6055.09)*
Munition*: a complete device charged with explosives, propellants, pyrotechnics, initiating composition, or chemical, biological, radiological, or nuclear material for use in operations including demolitions. (See AFPD 21-2)*
Energetic Material*: ammunition, munition fliers, demolition material, solid rocket motors, liquid propellants, cartridges, pyrotechnics, mines, bombs, grenades, warheads of all types, explosives elements of ejection and aircrew egress systems, air-launched missiles, and those explosive components of missile systems and space systems, and assembled kits and devices containing explosive material. (See DSER 6055.09)*
Electromagnetic Radiation*: radiation made up of oscillating electric and magnetic fields and propagated with the speed of light. Includes gamma radiation, X-rays, ultraviolet, visible, and infrared radiation, and radar and radio waves. (See DSER 6055.09)*
Munitions Systems*: include any release, control, suspension, and dispersal devices. This includes all suspension systems (including racks, launchers, and rails), dispensers, or packaging devices used to contain or disperse non-nuclear explosive devices, or used as the direct launching platform.*

17. Will this activity use directed energy devices? This includes, but is not limited to, microwaves or lasers.
    - ☐ Yes (Specify which milestone(s)) _____
    - ☐ No
    - ☐ Unknown at this time

18. Will this activity involve explosives of any size or type? This includes, but is not limited to, ammunitions, propellants, munitions, or energetic materials.
    - ☐ Yes (Specify which milestone(s)) _____
    - ☐ No
    - ☐ Unknown at this time

19. Will this activity involve electromagnetic radiation? This includes, but is not limited to, radio waves, gamma rays, and X-rays.
    - ☐ Yes (Specify which milestone(s)) _____
    - ☐ No
    - ☐ Unknown at this time

Hazardous Material(s), cont'd: Answer the questions below about hazardous materials.

20. Will this activity involve a munitions system?

☐Yes (Specify which milestone(s)) _____
☐No
☐Unknown at this time

21. Will this activity use any other kind of hazardous material not already specified in questions 17-20?

☐Yes (Specify hazardous material and which milestone(s)) _____
☐No
☐Unknown at this time

Human Subject Research (HSR): Answer the questions below about human subject involvement in this proposal. These particularly relate to efforts in which researchers obtain data or identifiable private information about living individuals through intervention or interaction with the individual. This can include the use of human organs, tissue, body fluids, as well as graphic, written, or recorded information. *(See 32 CFR 219, AFPD 40-4, and DoDI 3216.02_AFI 40-402)*

22. Will the project involve interaction or intervention with humans?

☐Yes (Specify which milestone(s)) _____
☐No

23. Will the proposed activity involve infectious agents and toxins, human-derived materials, or recombinant DNA?

☐Yes (Specify which milestone(s)) _____
☐No

24. Will the project involve access to, collection, use, and analysis, or sharing of human data or bio specimens?

☐Yes (Specify which milestone(s)) _____
☐No

Animal Testing: Identify if this activity will involve animals.

25. Will this activity involve animals?

☐Yes (Specify which milestone(s)) _____
☐No

Radio Frequency: Answer the question below about radio frequency.

26. Will this activity include radio frequency (RF) use? This includes, but is not limited to, radios, radars, and datalinks. If yes, please work with the AFRL Frequency Managers (AFRL/DOO) to determine requirements.

☐Yes (Specify which milestone(s)) _____
☐No
☐Unknown at this time

IMPORTANT!
If you answered "Yes" to any questions in the Flight Activity section (items 14, 15 or 16),
you must complete the
FLIGHT ACTIVITY INFORMATION WORKSHEET
that follows.

Flight Activity Information Worksheet

Purpose & Instructions: The Air Force Research Laboratory (AFRL) serves as the Lead Test Organization (LTO) for all flight activities associated with Department of the Air Force SBIR/STTR contracts. AFRL is responsible for overseeing and managing all aspects of flight testing to ensure that these activities are conducted safely and in compliance with regulatory and operational standards.

This information is critical for evaluating potential safety risks and ensuring compliance with safety protocols for experimental and operational flight activities. This information will enable AFRL to conduct a thorough safety evaluation, mitigate risks, and ensure that all flight operations adhere to the highest standards of safety and effectiveness.

Providing sufficient detail to the following questions may reduce likelihood of disruptions or delays in contract award in the event your proposal is selected for funding.

General Details:

FA1. Provide general description of the proposed flight test program (4000 characters max):

General Details, Cont'd:

FA2. Concisely describe your general and specific test objectives (4000 characters max):

FA3. Describe the number and duration of flight test events (4000 characters max):

FA4. Anticipated First Flight Test Date (MM/DD/YYYY):

Aircraft: Answer questions FA5 through FA18 for each aircraft:

FA5. Aircraft Name:

Type of Vehicle

FA6: What type of aircraft will be utilized?

- ☐ Fixed Wing
- ☐ Rotary Wing
- ☐ Unmanned Aerial System (UAS)
- ☐ Other

FA7. Provide the make/model and basic specifications such as size, weight, maximum altitude, and max air speed:

FA8. Identify if the air vehicle is a new design, modification of an existing design, or no modifications will be needed to execute your flight test:

Aircraft: Answer questions FA5 through FA18 for each aircraft:

Government Interests

FA9. Will the aircraft be leased?

☐Yes
☐No

If Yes, who will be leasing the aircraft at the time of the flight activity?(Provide specific contractor or government organization):

If No, who will own the aircraft at the time of the flight activity?(Provide specific contractor or government organization):

FA10. Does the government have an interest in owning the aircraft at a later time?

☐Yes
☐No
☐Unknown at this time

If Yes, please explain:

Aircraft: Answer questions FA5 through FA18 for each aircraft:

FA11. Does the government have an interest in owning any of the spectrum dependent equipment which is part of this system?

☐Yes
☐No

If Yes, please explain:

FA12. Will there be any government furnished equipment (GFE) on the aircraft?

☐Yes
☐No

If yes, please specify GFE proposed to be onboard the aircraft:

If yes, please specify the value of the GFE:

FA13. Will there be any spectrum dependent government furnished equipment (GFE) on the aircraft?

☐Yes
☐No

If yes, explain:

Aircraft: Answer questions FA5 through FA18 for each aircraft:

FA14. What is the cost of the aircraft, to include any modifications or systems under test? (include ground equipment and equipment flown on other aircraft)

Are Humans at Risk?

FA15. Will the aircraft carry any personnel in addition to the required flight crew?

- ☐ Yes
- ☐ No

If yes, describe role of all personnel onboard the air vehicle:

Liability

FA16. Who will operate the aircraft? (Select all that apply)

- ☐ Contractor Employee
- ☐ Subcontractor Employee
- ☐ Government Employee
- ☐ Other

If Other, please explain:

Aircraft: Answer questions FA5 through FA18 for each aircraft:

FA17. Is the aircraft insured for the proposed flight activity? (to include loss or damage of the vehicle, liability, injury to persons on board aircraft – please provide the declarations page of insurance policy or estimated future coverage as an attachment)

☐ Yes
☐ No

☐ If yes, I have attached the declarations page of insurance policy or estimated future coverage as an attachment with my proposal

COTS UAS

Section 848 of the 2020 National Defense Authorization Act prohibits operation and procurement of UAS or UAS components made in the People's Republic of China (PRC)

FA18. Does the UAS contain any components made in the PRC?

☐ Yes
☐ No

If Yes, please describe:

Location

FA19. Where will the aircraft be operated? (Select all that apply)

- ☐ Enclosed space (building, netted enclosure, etc.)
- ☐ Open Air

FA20. Where will the proposed flight operations take place (specify city, state, test range, facility, type of airspace, etc)? *Note: Specify all proposed flight operations locations.*

Other Implications

FA21. Are the proposed flight activities exclusively for testing purposes?

- ☐ Yes
- ☐ No

FA22. Will the aircraft be ferried as part of the contract before, during or after the test program?

- ☐ Yes
- ☐ No

If Yes, please describe:

Potential Risk

FA23. Will flight activities involve testing of aircraft subsystems?

- ☐ Yes
- ☐ No

If Yes, please specify which systems:

FA24. Will the aircraft be used to carry (either integrated into the aircraft or simply carried by the aircraft) the item being tested?

- ☐ Yes
- ☐ No

If Yes, please describe:

Potential Risk

FA25. Will the fight activity be used to test development or reliability of aircraft components?

☐Yes
☐No

If Yes, please describe:

FA26. Will the flight activity be conducted to determine or demonstrate critical operating characteristics of an aircraft?

☐Yes
☐No

If Yes, please describe:

FA27. Will the flight activity involve high angle attack tests?

☐Yes
☐No

If Yes, please describe:

FA28. Will the flight activity involve flutter tests?

☐Yes
☐No

If Yes, please describe:

Potential Risk

FA29. Will the flight activity involve loads tests?

☐Yes
☐No

If Yes, please describe:

FA30. Will the flight activity involve critical stores separation tests?

☐Yes
☐No

If Yes, please describe:

FA31. Will the flight activity include flights to determine or expand flight or propulsion system envelopes?

☐Yes
☐No

If Yes, please describe:

FA32. Will the flight activity include flights to determine performance, flight characteristics, and/or handling qualities?

☐Yes
☐No

If Yes, please describe:

Potential Risk

FA33. Will the flight activity include flights of an aircraft whose flight characteristics may have been altered by configuration changes?

☐ Yes
☐ No

If Yes, please describe:

FA34. Will the flight activity include initial flights of aircraft which have undergone "major modification"?

☐ Yes
☐ No

If Yes, please describe:

FA35. Will the flight activity include component development flights where failure of the test component would make the flight hazardous in nature and/or involve greater than normal risk?

☐ Yes
☐ No

If Yes, please describe:

CAO or PAO

FA36. How will the planned flights be executed?

- ☐ Civil Aircraft Operations (CAO) (the activity will occur under FAA rules)
- ☐ Public Aircraft Operations (PAO) (an aircraft operation is "public" when the aircraft is owned by the government, or is operated by the government or operates outside of the purview of the FAA airworthiness certificate)

FA37. Will the aircraft be used for any military type activities (i.e. not just testing), such as carrying a weapon or launching a missile?

- ☐ Yes
- ☐ No

If Yes, please describe:

Proper Use Memo

FA38. Does the airborne system include any sensors that could be used to observe personnel on the ground? This may include any open-air data collection to include imagery, full motion video, electro optical/infrared (EQ/IR), Light Detection and Ranging (LIDAR), Synthetic Aperture Radar (SAR), Wide Area Motion Imagery.

- ☐ Yes
- ☐ No

If Yes, describe type of sensor:

NOTE: If you answer "Yes" to FA38, a Proper Use Memorandum may be needed to ensure compliance with laws regarding domestic intelligence collection.