

DOE-ID NEPA CX DETERMINATION Idaho National Laboratory

SECTION A. Project Title: Liteye R&D Collaboration Efforts R1

SECTION B. Project Description and Purpose:

Revision 1:

This revision includes additional testing locations at the National Security Test Range (NSTR), WRRTF Demolition Landfill (TAN 1756), and two locations for microwave relay stations. The locations are shown in Figure 1 and Figure 2.

Figure 1. Antenna Relay Spot Coordinates (N 43°42'3.84, W 112°49'41.83)



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Figure 2. Microwave Relay Spot Coordinates (N 43°47'29.80, W 112°44'57.87)



The locations shown in Figure 1 and Figure 2 will have a small generators to run power to the locations for cUAS testing. The generators and amount of fuel used are below:

3.5K generator diesel (~20 gallons)

2k honda generator (~10 gallons of fuel as backup)

The microwave relay systems are made to be wheeled in or backed in to the location shown in Figure 1 and 2. The stations have large tires to go over rough terrain. There is a generators onboard/built-in will be used. There will be a drip pan underneath to catch any spills or leaks from the generators.

Other locations for the project are already established (WRRTF and UAS Test Range) and all activities will be on paved asphalt or placed gravel. Testing will be conducted at the NSTR explosive range and consist of using kinetics and explosives on drones. Waste generation from this event consists of plastic and metal fragmentations from drones and projectiles. Additional generators will be used for electricity during testing. The total amount of fuel used is ~15 gallons. All equipment will be provided by Liteye.

Original ECP:

Idaho National Laboratory (INL) has been identified by Liteye as the ideal location to provide counter Unmanned Aircraft Systems (cUAS) systems testing. In order to effectively field the cUAS systems, real-world testing and evaluation must be accomplished. Contractor will provide physical and personnel resources for testing and evaluating the system. Liteye is testing a new counter UAS system that is being deployed in the near future. They have been unable to test the system fully as there have been limitations to the

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frequencies they can use and the airspace needed to provide a full system test. INL will help with frequency allocation, provide airspace utilizing the Certificate of Authorization from the Federal Aviation Administration unique to INL, and provide logistical and UAS flight operations. The Unmanned Aircraft Systems (UAS) Test Range will be configured to support the UAS flights, as well as operations of the cUAS systems. This arrangement will include, but is not limited to:

- Large structure for additional work/instruction space
- Operator Control Trailer, if needed
- Operation and testing infrastructure (power, internet, etc.)
- UAS Test Range and surrounding area for flight operations.

Task No.	Tasks	INL Role/Responsibilities	Liteye Role/Responsibilities
1	Coordinate logistics	Provide off-loading capabilities as needed. Provide temporary storage space.	Prepare logistics and provide information on ETA.
2	Coordinate Test Range	Secure airspace clearance.	Provide a list of desired UAS platforms to be used.
3	UAS Operations	Provide Pilot-in Command (PIC) and necessary observers.	
4	Secure Frequency Spectrum Authority	Coordinate frequency spectrum	Provide frequencies to be used during testing

The activity will take place at the UAS test range. There are no plans to purchase any new equipment. Equipment that Liteye brings on-site will return with them. There is always a risk of a crash. There are strict preflight checklists that are followed for assembly and in preparation to launch. But regardless, there is always that chance. There is a risk of fire in the event of a crash as well. There are "go boxes" that have fire extinguishers in them and all of our trucks have shovels to help mitigate any fire issues. We will recover any downed drone by taking T-roads to the closest point possible and walk from there. Restroom trailers will be used to accommodate personnel.

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SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

If this project or activity produces or causes air emissions, and it is not stated in this ECP how those emissions caused by this project or activity are exempt, then an APAD is required for documentation.

Generators will be used to support electricity along with vehicle emissions. The possible air emissions that may be produced will be from the generator. Since the generator is temporary it is exempt from permitting requirements.

Discharging to Surface-, Storm-, or Ground Water

NA

Disturbing Cultural or Biological Resources

There is the potential for this work to impact vegetation and for project personnel to interact with various wildlife species. A Biological Resource Review will be arranged within two weeks prior to the initiation of any activities that might disturb soil or vegetation and again following completion of project activities. A nesting bird survey is included with the Biological Resource Review for actions occurring between April 1 - October 1 per compliance with the Migratory Bird Treaty Act. Bat surveys are also included with the Biological Resource Review in accordance with the INL Bat Protection Plan.

This activity is excluded from Section 106 review as the proposed action has no potential to cause effects to historic properties.

Although the chance for increased biological disturbance within the SGCA is minimal, there is the potential for some impact to wildlife and habitat during the course of the proposed action. Sage grouse could be impacted by noise and soil disturbance in the event of UAV malfunction.

Generating and Managing Waste

Generation of plastic and metal fragmentations from drones and projectiles from testing done at NSTR explosive range preapproved areas. Typical municipal waste may be generated to include plastic bottles, paper, etc.

Releasing Contaminants

Whenever fuel is used there is a potential for spills or releases.

Using, Reusing, and Conserving Natural Resources

All materials will be reused and recycled where economically practicable. All applicable waste will be diverted from disposal in the landfill where conditions allow.

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SECTION D. Determine Recommended Level of Environmental Review, Identify Reference(s), and State Justification: Identify the applicable categorical exclusion from 10 Code of Federal Regulation (CFR) 1021, Appendix B, give the appropriate justification, and the approval date.

For Categorical Exclusions (CXs), the proposed action must not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, or similar requirements of Department of Energy (DOE) or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment or facilities; (3) disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources (see 10 CFR 1021). In addition, no extraordinary circumstances related to the proposal exist that would affect the significance of the action. In addition, the action is not "connected" to other action actions (40 CFR 1508.25(a)(1) and is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1608.27(b)(7)).

References:

B1.2 "Training exercises and simulations", B3.2 "Aviation activities", B3.11 "Outdoor tests and experiments on materials and equipment components"

Justification:

B1.2 Training exercises and simulations. Training exercises and simulations (including, but not limited to, firing-range training, small-scale and short-duration force-on-force exercises, emergency response training, fire fighter and rescue training, and decontamination and spill cleanup training) conducted under appropriately controlled conditions and in accordance with applicable requirements.

B3.2 Aviation activities. Aviation activities for survey, monitoring, or security purposes that comply with Federal Aviation Administration regulations.

B3.11 Outdoor tests and experiments on materials and equipment components. Outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment (including, but not limited to, weapon system components) under controlled conditions. Covered actions include, but are not limited to, burn tests (such as tests of electric cable fire resistance or the combustion characteristics of fuels), impact tests (such as pneumatic ejector tests using earthen embankments or concrete slabs designated and routinely used for that purpose), or drop, puncture, water-immersion, or thermal tests. Covered actions would not involve source, special nuclear, or byproduct materials, except encapsulated sources manufactured to applicable standards that contain source, special nuclear, or byproduct materials may be used for nondestructive actions such as detector/sensor development and testing and first responder field training.

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act) Yes No

Approved by Jason L. Anderson, DOE-ID NEPA Compliance Officer on: 04/13/2023.