



Environmental Review Form for Argonne National Laboratory

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Created By:	Brocker, William A.

Creator

Badge: 49659 Name: Brocker, William A.
 Cost Center: 283 Division: EGS
 Job Title: ALD ESH/QA Coordinator Employee Type: Regular Full-Time Exempt
 Building: 202 Lab Extension: 2-1186

General Information

Project/Activity Title: Off-site Use of UASs for Research Applications
 ASO NEPA Tracking No.: Type of Funding:
 B & R Code: Identifying Number: N/A
 SPP Proposal Number: CRADA Proposal Number:
 Work Project Number: ANL Accounting Number: (Item 3a in Field Work Proposal)
 Other (explain):
 List appropriate NEPA Owners:
 Division: GSS NEPA Owner:

Cost Code

Task: Center: Project: Activity:

Description of Proposed Action

Argonne National Laboratory (Argonne) wishes to use small unmanned aircraft systems (sUAS) for a variety of experimental and inspection applications. These will include both fixed-wing unmanned aircraft as well as multi-copter UAS that are each less than or equal to 55 pounds in weight. All UASs will either be commercially available equipment or constructed from commercially available light weight airframes. UAS will typically be equipped to carry sensing/data collection technologies (i.e. optical cameras, sensors, hyperspectral cameras, etc.). Flights will be consistent with DOE's blanket FAA Certificate of Authorization, which specifies conditions on flights (e.g., maximum altitude, acceptable weather conditions, time of day considerations, and acceptable locations/airspace for flights).

Description of Affected Environment

Operations of the UASs will be from ground level (GL) to 400 feet above ground level. Flights will occur in Class G air space, with FAA notification requirements implemented as required. Flights over property other than Argonne will have written authorization from property owners. All aircraft flown will be registered with the FAA, and will have air worthiness established. All work will be carried out within the requirements of LMS-POL-8 Aviation Management and Safety and LMS-PROC-261 Aviation Safety. Flights will be conducted under the conditions specified in the Department of Energy's blanket FAA Certificate of Authorization and will be subject to DOE HQ Office of Aviation Management and Argonne Site Office approval. Every flight will include a certified airman as pilot in command (PIC) and at least one Visual Observer with the appropriate certification. Flights will be terminated if there are conditions where collisions with birds are possible. Flights will not be conducted that would, in any way, result in observable impacts to terrestrial wildlife health or behavior.

Potential Environmental Effects

- Attach explanation for each "yes" response near bottom of form.
- See Instructions for Completing Environmental Review Form.

Section A (Complete For All Projects)	Yes	No	Explanation
Project evaluated for Pollution			

1.	Prevention and Waste Minimization opportunities and details provided under items 2, 4, 6, 7, 8, 16, and 20 below, as applicable	<input checked="" type="radio"/>	<input type="radio"/>	Explanation below under hazardous waste section.
2.	Air Pollutant Emissions	<input type="radio"/>	<input checked="" type="radio"/>	
3.	Noise	<input checked="" type="radio"/>	<input type="radio"/>	Although all UASs emit nuisance noise within a short radius of the unit, this impacts only equipment operators. Mission traffic patterns are located over low population areas during working hours to minimize impact to workers.
4.	Chemical/Oil Storage/Use	<input type="radio"/>	<input checked="" type="radio"/>	
5.	Pesticide Use	<input type="radio"/>	<input checked="" type="radio"/>	
6.	Toxic Substances Control Act (TSCA) Substances			
6a.	Polychlorinated Biphenyls (PCBs)	<input type="radio"/>	<input checked="" type="radio"/>	
6b.	Asbestos or Asbestos Containing Materials	<input type="radio"/>	<input checked="" type="radio"/>	
6c.	Other TSCA Regulated Substances	<input type="radio"/>	<input checked="" type="radio"/>	
6d.	Import or Export of Chemical Substances	<input type="radio"/>	<input checked="" type="radio"/>	
7.	Biohazards	<input type="radio"/>	<input checked="" type="radio"/>	
8.	Effluent/Wastewater (If yes, see question #12 and contact Peter Lynch (FMS-SEP) at 2-4582 or lynch@anl.gov)	<input type="radio"/>	<input checked="" type="radio"/>	
9.	Waste Management			
9a.	Construction or Demolition Waste	<input checked="" type="radio"/>	<input type="radio"/>	UASs run on rechargeable batteries, mostly of the Li variety. All spent batteries owned by Argonne will be sent out for recycling when an option; sent out as hazardous waste if not.
9b.	Hazardous Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9c.	Radioactive Mixed Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9d.	Radioactive Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9e.	Asbestos Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9f.	Biological Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9g.	No Path to Disposal Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9h.	Nano-material Waste	<input type="radio"/>	<input checked="" type="radio"/>	
10.	Radiation	<input type="radio"/>	<input checked="" type="radio"/>	
11.	Threatened Violation of ES&H Regulations or Permit Requirement	<input checked="" type="radio"/>	<input type="radio"/>	The Argonne aviation safety SME has flagged this project as requiring a COA (certificate of operation) from the FAA, which has been obtained.
12.	New or Modified Federal or State Permits	<input checked="" type="radio"/>	<input type="radio"/>	The Argonne aviation safety SME has flagged this project as requiring a COA (certificate of operation) from the FAA, which has been obtained.
13.	Siting, Construction, or Major Modification of Facility to Recover, Treat, Store, or Dispose of Waste	<input type="radio"/>	<input checked="" type="radio"/>	
14.	Public Controversy	<input checked="" type="radio"/>	<input type="radio"/>	There has been significant media attention recently regarding the extent to which UASs may interfere with homeowner Fourth Amendment rights. The FAA-approved operational area for this project is laid out in the attached COA on page 15 and will not interfere in any private property rights.
15.	Historic Structures and Objects	<input type="radio"/>	<input checked="" type="radio"/>	
16.	Disturbance of Pre-existing Contamination	<input type="radio"/>	<input checked="" type="radio"/>	
17.	Energy Efficiency, Resource Conserving, and Sustainable Design Features	<input type="radio"/>	<input checked="" type="radio"/>	
Section B (For Projects that Occur Outdoors)		Yes	No	
	Threatened or Endangered Species,			

18.	Critical Habitats, and/or other Protected Species	<input type="radio"/>	<input checked="" type="radio"/>	
19.	Wetlands	<input type="radio"/>	<input checked="" type="radio"/>	
20.	Floodplain	<input type="radio"/>	<input checked="" type="radio"/>	
21.	Landscaping	<input type="radio"/>	<input checked="" type="radio"/>	
22.	Navigable Air Space	<input checked="" type="radio"/>	<input type="radio"/>	All unmanned aviation systems (UASs) will be operated below 400 feet AGL (above ground level) in Class G airspace. Distances from public airports will be maintained per the limitations documented in DOE's Blanket COA. Risk mitigation strategies are outlined in the attached UAS Operations and Procedures Manual.
23.	Clearing or Excavation	<input type="radio"/>	<input checked="" type="radio"/>	
24.	Archaeological Resources	<input type="radio"/>	<input checked="" type="radio"/>	
25.	Underground Injection	<input type="radio"/>	<input checked="" type="radio"/>	
26.	Underground Storage Tanks	<input type="radio"/>	<input checked="" type="radio"/>	
27.	Public Utilities or Services	<input type="radio"/>	<input checked="" type="radio"/>	
28.	Depletion of a Non-Renewable Resource	<input type="radio"/>	<input checked="" type="radio"/>	
Section C (For Projects Outside of ANL)		Yes	No	
29.	Prime, Unique, or Locally Important Farmland	<input checked="" type="radio"/>	<input type="radio"/>	The research needs may necessitate UAS operation above, prime, unique, or locally important farmland, in such cases appropriate permissions will be obtained. It is not anticipated nor likely that farmland will be adversely impacted.
30.	Special Sources of Groundwater (such as sole source aquifer)	<input checked="" type="radio"/>	<input type="radio"/>	The research needs may necessitate UAS operation above special sources of groundwater, in such cases appropriate permissions will be obtained. It is not anticipated nor likely that groundwater will be adversely impacted.
31.	Coastal Zones	<input checked="" type="radio"/>	<input type="radio"/>	The research needs may necessitate UAS operation above coastal zones, in such cases appropriate permissions will be obtained. It is not anticipated nor likely that coastal zones will be adversely impacted.
32.	Areas with Special National Designations (such as National Forests, Parks, or Trails)	<input checked="" type="radio"/>	<input type="radio"/>	The research needs may necessitate UAS operation above special sources national designations, in such cases appropriate permissions will be obtained. It is not anticipated nor likely that special sources of national designations will be adversely impacted.
33.	Action of a State Agency in a State with NEPA-type Law	<input type="radio"/>	<input checked="" type="radio"/>	
34.	Class I Air Quality Control Region	<input checked="" type="radio"/>	<input type="radio"/>	The research needs may necessitate UAS operation in a Class I Air Quality Control Region, in such cases appropriate permissions will be obtained. It is not anticipated nor likely that Air Quality will be adversely impacted.

Categorical Exclusion

ANL NEPA Reviewer Use Only

- My approval is the final approval necessary
- This form requires additional approval from DOE

To be Completed by DOE/ASO

Section D	Yes	No
Are there any extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal?	<input type="radio"/>	<input checked="" type="radio"/>
Is the project connected to other actions with potentially significant impacts or related to other proposed action with cumulatively significant impacts?	<input type="radio"/>	<input checked="" type="radio"/>
If yes, is a categorical exclusion determination precluded by 40 CFR 1506.1 or 10 CFR 1021.211?	<input type="radio"/>	<input type="radio"/>
Can the project or activity be categorically excluded from preparation of an Environment Assessment or Environmental Impact Statement under Subpart D of the DOE NEPA Regulations?	<input checked="" type="radio"/>	<input type="radio"/>

If yes, indicate the class or classes of action from Appendix A or B of Subpart D under which the project may be excluded:

DOE approves this ERF under the following category of 10 CFR, Part 1021, Subpart D, Appendix B: B 3.2 Aviation activities.

If no, indicate the NEPA recommendation and class(es) of action from Appendix C or D to Subpart D to Part 1021 of 10 CFR.

Attachments

File Description: ANL-985 Approved for Argonne Site UAS activities

[View Attachment](#)

File Description: FAA Form 7711-1 UAS COA Attachment dated 9-22-2016

[View Attachment](#)

File Description: Non-Aircraft Specific Operations Guide for Flights Conducted Under Blanket FAA Authorization

[View Attachment](#)

File Description: UAS CRM Training Standards

[View Attachment](#)

File Description: Aircraft Registration

[View Attachment](#)

File Description: Aircraft Operating Manual

[View Attachment](#)

File Description: Airworthiness Documentation

[View Attachment](#)

Comments

Add Approver

Approver Name	Approver Badge	Reason	Delete
Johnson, Robert L.	42078	Manager of program	

Notifications

The approval notification email will be copied to the people listed below.

Badge	Name	Division	Delete
42078	Johnson, Robert L.	GSS	
276734	Swanson, Eric C.	GSS	
56408	Aylesworth, Terrence W.	GSS	

ASO-CX Number

ASO-CX- 338

Comments:

DOE ASO and DOE Chicago track this ERF approval as ASO-CX-338

Approval

Approver	Action	Date Routed	Action Date	Approval Reason / Comments	Approval Type
Brocker, William A.	APPROVED	2017-02-16	2017-02-16 09:40:43.0	Creator :	PRIMARY
Brocker, William A.	APPROVED	2017-02-16	2017-02-16 09:40:43.0	Allows access to the form :	PRIMARY
Brocker, William A.	APPROVED	2017-02-16	2017-02-16 09:40:43.0	Project Manager :	PRIMARY
Johnson, Robert L.	APPROVED	2017-02-16	2017-02-16 10:26:20.0	Manager of program :	PRIMARY

Brockner, William A.	APPROVED	2017-02-16	2017-02-16 09:40:43.0	NEPA Owner Approval for Argonne Environmental Review :	PRIMARY
Ptak, Jill S.	APPROVED	2017-02-16	2017-02-17 12:18:21.0	ANL NEPA Reviewer :	PRIMARY
Hellman, Karen B.	APPROVED	2017-02-17	2017-02-17 14:43:57.0	ANL-985 Review and Approval :	PRIMARY
Stine, Gail Y.	APPROVED	2017-02-17	2017-02-20 08:40:23.0	ANL-985 Review and Approval :	PRIMARY
Lee, Alice J. for Kearns, Paul K.	APPROVED	2017-02-20	2017-02-20 08:46:51.0	ANL-985 ANL COO Review and Approval :	DELEGATE
Joshi, Kaushik N.	APPROVED	2017-02-20	2017-03-02 13:59:44.0	ANL-985 DOE-ASO Review and Approval : ASO-CX-338	PRIMARY
Siebach, Peter R.	APPROVED	2017-03-02	2017-03-07 14:10:33.0	ANL-985 DOE NEPA Compliance Officer Review and Approval :	PRIMARY
