



Environmental Review Form for Argonne National Laboratory

<b>Form:</b>	ANL-985
<b>Version:</b>	5
<b>Your Form ID:</b>	ANL-985-2012
<b>Form Status:</b>	Approved
<b>Date:</b>	4/3/2024 9:10:50 AM
<b>Created By:</b>	Harris, Shana E

**Creator**

Badge:	311196	Name:	Harris, Shana E
Cost Center:	256	Division:	WSE
Job Title:	ESH Multi-Functional 3	Employee Type:	Regular Full-Time Exempt
Building:	203	Lab Extension:	2-5482

**General Information**

Project/Activity Title: Third ARM Mobile Facility (AMF3) Installation and Operation of Radar Sites

ASO NEPA Tracking No.: \_\_\_\_\_ Type of Funding: \_\_\_\_\_

B & R Code: \_\_\_\_\_ Identifying Number: ANL-985-2012

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: EVS NEPA Owner: \_\_\_\_\_

**Financial Plans**

To select a Financial Plan, click the magnifying glass icon to open a search window.

Cost Center: Project: Phase: Task:

**Description of Proposed Action**

This ERF covers activities associated with the installation and operation of the third Atmospheric Radiation Measurement (ARM) user facility, third mobile facility (AMF3). ARM is a multi-laboratory U.S. Department of Energy (DOE) scientific user facility under the DOE Office of Science Biological and Environmental Research program. The ARM user facility provides the climate research community with strategically located in-situ and remote-sensing observatories designed to improve the understanding and representation of clouds and aerosols as well as their interactions and coupling with the Earth surface in climate and earth system models. This phase of the AMF3 Project would encompass 2 radar sites: Scanning ARM Cloud Radar (SACR Radar) and a second-generation Cloud Scanning ARM Precipitation Radar (CSAPR2 Radar) both located in Lawrence County. The 2 radar sites would be installed in an area approximately 20 - 30+ miles from the AMF3 main site at the Black Warrior Work Center, located at the Bankhead National Forest in Alabama. Although the actions under this NEPA for the 2 radar sites are performed under the same science program, these sites have independent utility and are not connected actions with the other ARM-AMF3 sites previously installed. Radar site land acquisition would be completed and approved to conduct atmospheric research. The radar sites would have site improvements that would consist of installation and/or connection of underground power and fiber, concrete pads, cement piers dug to an approximate depth of 5 feet, twenty foot risers for the radar and modified shipping containers installed for instrumentation during construction of the sites. The radar sites would have various pieces of scientific equipment for atmospheric science and be surrounded by a fence. The radar may also include a generator for backup power, camera security systems, and surrounding gravel surfaces. Operation of the radar sites would be remote to collect atmospheric data and consist of periodic maintenance checks of equipment and grounds. The radar sites would have an operational period of 5-8 years. At the conclusion of the project, Argonne National Laboratory would return the land to the landowners expectation. This may include removal of all cement platforms and removal of all underground electrical cables and remediation of the land as requested by landowner. All scientific instrumentation and supportive structures at the radar sites would also be removed at project completion.

**Description of Affected Environment**

AMF3's two radar sites would be located in Lawrence County (SACR) and (CSAPR2), Alabama. Each radar site location would be approximately 1-acre overall, with an actual instrumentation footprint of approximately 7520 square feet. Land is in existing rural, agricultural use in private ownership. A map of the radar sites is attached.

## 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
1.	Project evaluated for Pollution 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"/>	See individual explanations below. The proposed action would be evaluated before implementation to identify options to reduce or eliminate generation of waste materials.
2.	Air Pollutant Emissions	<input checked="" type="radio"/>	<input type="radio"/>	Minor emissions from cars and light duty vehicles and back-up power diesel generators operated at the two radar sites. The back-up generators would be EPA Tier IV approved: (Regulations for Emissions from Heavy Equipment with Compression-Ignition (Diesel) Engines).
3.	Noise	<input checked="" type="radio"/>	<input type="radio"/>	Noise from typical construction and installation activities would occur. Work would refer to DOE 10 C.F.R. 851 Worker Safety and Health Program and utilize personal protection equipment as needed. Normal operations may create noise within the allowable noise range not requiring hearing protection equipment
4.	Chemical/Oil Storage/Use	<input checked="" type="radio"/>	<input type="radio"/>	Chemicals used at the supporting sites would be governed by the requirements at the AMF3 main site at the Black Warrior Work Center, located at the Bankhead National Forest. Chemical use during the construction and Installation process would be governed under ES&H documentation and follow appropriate EPA requirements.
5.	Pesticide Use	<input type="radio"/>	<input checked="" type="radio"/>	
6.	<b>Toxic Substances Control Act (TSCA) Substances</b>			
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 (HSE) at 2-4582 or lynch@anl.gov)	<input type="radio"/>	<input checked="" type="radio"/>	
9.	<b>Waste Management</b>			

9a.	Construction or Demolition Waste	<input checked="" type="radio"/>	<input type="radio"/>	Construction debris may be generated from these actions. All debris would be collected and placed in appropriate collection systems for recycling where appropriate. Wastes generated would be characterized to determine if they meet the Clean Construction or Demolition Debris(CCDD) criteria for Alabama. If waste does not meet CCDD requirements, collected waste would be disposed of in accordance with EPA -RCRA or other applicable authorities
9b.	Hazardous Waste	<input checked="" type="radio"/>	<input type="radio"/>	Radar sites would generate minor amounts of hazardous waste on an inconsistent basis and follow the governance of the Main ARM AMF3 Site for hazardous waste management under a Very Small Quantity Generator (VSQG) as defined in 40 CFR Part 262.13 and 262.14 of the Code of Federal Regulations (CFR). Waste would be disposed of in accordance to applicable requirements.
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 type="radio"/>	<input checked="" type="radio"/>	
12.	New or Modified Federal or State Permits	<input type="radio"/>	<input checked="" type="radio"/>	
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 type="radio"/>	<input checked="" type="radio"/>	
15.	Historic Structures and Objects	<input type="radio"/>	<input checked="" type="radio"/>	The project area and Area of Potential Effect is located in Lawrence County, Alabama. The Alabama SHPO requested further study of the sites. Midsouth Cultural Resource Consultants (MCRC) performed a review of the viewshed of the proposed undertaking indicated and concluded it would not be visible from significant historical properties and recommended no further study of the sites. The studies were sent to the Alabama State Historic Preservation Office for review; and received concurrence of DOE's determination of no effect to historic properties.
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"/>	
<b>Section B (For Projects that Occur Outdoors)</b>		<b>Yes</b>	<b>No</b>	
18.	Threatened or Endangered Species, Critical	<input type="radio"/>	<input checked="" type="radio"/>	U.S. Fish and Wildlife Services concurrence statement: No federally listed species/critical habitat are known to occur in the project area. As described, the project will have no significant

	Habitats, and/or other Protected Species			impact on fish and wildlife resources.
19.	Wetlands	<input type="radio"/>	<input checked="" type="radio"/>	Information obtained from the Fish and Wildlife Service : National Wetland Inventory - Wetland Mapper supports observation that there are no wetlands located within the SACR and CSAPR2 radar sites. Any wetland buffers outlined in Alabama regulations would be followed at all radar sites with a minimum of a 30 foot buffer unless a more stringent buffer is a requirement.
20.	Floodplain	<input type="radio"/>	<input checked="" type="radio"/>	Information obtained from the Federal Emergency Management Agency : Floodplain Mapper website identifies that the SACR radar site has no flood zones in the area. The CSAPR2 radar site is 135 feet way from a large 1% annual chance flood hazard area. Neither of the radar sites (SACR or CSAPR2) are near any 100-year floodplains.
21.	Landscaping	<input type="radio"/>	<input checked="" type="radio"/>	
22.	Navigable Air Space	<input checked="" type="radio"/>	<input type="radio"/>	ARM program would obtain FAA approvals for all items pertaining to navigable airspace. Instruments meeting this requirement consist of Unmanned Aircraft Systems or Unmanned Aerial Vehicles (UAS/UAV), manned aircraft, and radars. There is the possibility that UAVs may be used in some campaigns, such as AAFs Artic Shark, DOE owned UASs and/or fixed wing aircraft that may fly over the AMF3 supporting radar sites. Any UAV/UAS campaign would follow FAA requirements and flight plans, and as applicable for ANL Users the ANL Aviation Safety Program for off-site flights. All aircraft activities UAS/UAV, manned aircraft will be required to obtain a DOE approved Aviation Safety Plan.
23.	Clearing or Excavation	<input checked="" type="radio"/>	<input type="radio"/>	The ARM program would grade and level the land at the radar sites to prep for instruments and install gravel and concrete pads/piers at depths up to approximately 5 ft.
24.	Archaeological Resources	<input type="radio"/>	<input checked="" type="radio"/>	The project area and Area of Potential Effect is located in Lawrence County, Alabama. The Alabama SHPO requested a phase 1 archaeological survey of the sites. Midsouth Cultural Resource Consultants (MCRC) found one isolated find and two archaeological sites were discovered and assessed in the course of this survey. Neither met the minimal criteria for the NRHP. No intact subsurface deposits attributable to prehistoric or historic activity were encountered. MCRC did not recommend any additional archaeological investigations in association with the proposed facilities (CSAPR2 and SACR) The studies are being sent to the Alabama State Historic Preservation Office and interested tribe, the Muscogee Nation, for their review. The SHPO concurred with the DOE's determination of no effect to historic properties. No response on the studies was received from the Muscogee Nation after 30 days time.
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 checked="" type="radio"/>	<input type="radio"/>	ARM AMF3 would extend or establish power and fiber utilities along existing roads for the radar sites.
28.	Depletion of a Non-Renewable Resource	<input type="radio"/>	<input checked="" type="radio"/>	
<b>Section C (For Projects Outside of ANL)</b>		<b>Yes</b>	<b>No</b>	
29.	Prime, Unique, or Locally Important Farmland	<input checked="" type="radio"/>	<input type="radio"/>	USDA-NRCS determined that these installations have a small footprint totaling less than an acre at each radar site and is not a permanent conversion of prime farmland. Due to the nature of the project and its extent, the project is exempt from the Farmland Protection Policy Act (FPPA). Erosion and sediment control measures would be implemented and maintained during the construction phase to protect natural resources. Information obtained from Natural Resource Conservation Service (NRCS) website identifies that work would be conducted on either prime, unique, or locally important farmland within Lawrence County.
30.	Special Sources of Groundwater (such as sole source aquifer)	<input type="radio"/>	<input checked="" type="radio"/>	
31.	Coastal Zones	<input type="radio"/>	<input checked="" type="radio"/>	
32.	Areas with Special National	<input type="radio"/>	<input checked="" type="radio"/>	

	Designations (such as National Forests, Parks, or Trails)			
33.	Action of a State Agency in a State with NEPA-type Law	<input type="radio"/>	<input checked="" type="radio"/>	Action of a State Agency in a State with a NEPA-type Law. ( Requires additional input from applicable states. The states of California, Connecticut, Hawaii, Indiana, Maryland, Maine, Minnesota, Montana, New York, North Carolina, Pennsylvania, South Dakota, Virginia, Washington, and Wisconsin)
34.	Class I Air Quality Control Region	<input type="radio"/>	<input checked="" type="radio"/>	

## 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: This project may be excluded under the following classes of action from Appendix B of Subpart D: B 3.1 Site characterization and environmental monitoring B 3.6 Small scale research and development, laboratory operations and pilot project B 3.8 Outdoor terrestrial ecological and environmental research		
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:** Radar Site Locations [View Attachment](#)

## Comments

### Add Approver

Approver Name	Approver Badge	Reason	Delete
Ritsche, Michael T.	53492	ARM Team	
Hickmon, Nicki L.	215793	ARM Team	
Campbell, Patty	231600	ARM Team	
Sullivan, Casey J.	58262	FWS SME	
Gierek, Lynn M.	36359	SHPO SME	
Lynch, Peter L.	46304	Environmental Compliance	

## Notifications

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

Badge	Name	Division	Delete
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**ASO-CX Number****ASO-CX- 408**

Comments:

This DOE approval is tracked as ASO-CX-408

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**Approval**

<u>Approver</u>	<u>Action</u>	<u>Date Routed</u>	<u>Action Date</u>	<u>Approval Reason / Comments</u>	<u>Approval Type</u>
Ptak, Jill S.	APPROVED	2024-08-15	2024-08-15 13:24:38.0	Creator :	PRIMARY
Harris, Shana E	APPROVED	2024-08-15	2024-08-15 13:33:57.0	Project Manager :	PRIMARY
Wescott, Konstance L. for Gierek, Lynn M.	APPROVED	2024-08-15	2024-08-16 12:52:03.0	SHPO SME : <b>Approving for Lynn - checked SHPO concurrences for no effect to historic properties indicated in explanation for historic buildings and archaeology.</b>	DELEGATE
Lynch, Peter L.	APPROVED	2024-08-15	2024-08-15 14:51:48.0	Environmental Compliance :	PRIMARY
Ritsche, Michael T.	APPROVED	2024-08-15	2024-08-15 13:45:11.0	ARM Team :	PRIMARY
Sullivan, Casey J.	APPROVED	2024-08-15	2024-08-15 13:56:34.0	FWS SME :	PRIMARY
Hickmon, Nicki L.	APPROVED	2024-08-15	2024-08-15 13:46:32.0	ARM Team :	PRIMARY
Campbell, Patty	APPROVED	2024-08-15	2024-08-15 14:13:44.0	ARM Team :	PRIMARY
Wozny, Bryan M.	APPROVED	2024-08-16	2024-08-16 13:22:28.0	NEPA Owner Approval for Argonne Environmental Review :	PRIMARY
Ptak, Jill S.	APPROVED	2024-08-16	2024-08-19 16:07:37.0	ANL NEPA Reviewer : <b>Re-routing with updated info #15, #24. Consultations completed with concurrence on DOE conclusion of no affect to historic properties</b>	PRIMARY
Hellman, Karen Sue	APPROVED	2024-08-19	2024-08-27 10:22:54.0	ANL-985 Review and Approval :	PRIMARY
Dunn, Michael W.	APPROVED	2024-08-27	2024-08-27 13:41:24.0	ANL-985 ANL Deputy COO Review and Approval :	PRIMARY
Joshi, Kaushik N.	APPROVED	2024-08-27	2024-08-28 12:31:14.0	ANL-985 DOE-ASO Review and Approval : <b>This DOE approval is tracked as ASO-CX-408</b>	PRIMARY
Siebach, Peter Rudolf	APPROVED	2024-08-28	2024-09-10 17:08:10.0	ANL-985 DOE NEPA Compliance Officer Review and Approval :	PRIMARY

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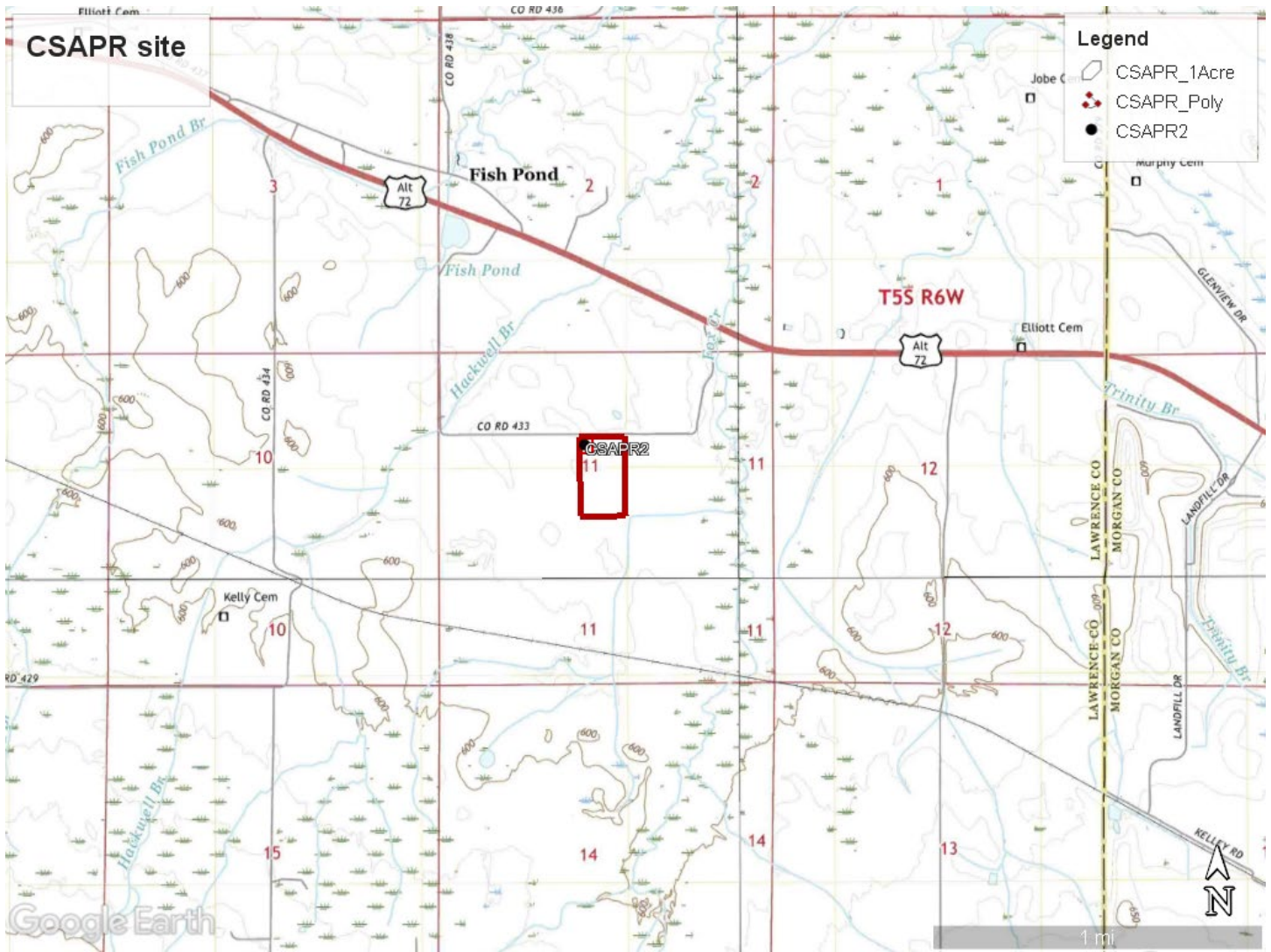


Figure 9 CSAPR 2 at Thelma Davis Farm in Lawrence County