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U. S. DEPARTMENT OF ENERGY OFFICE OF SCIENCE -- CHICAGO OFFICE

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) ENVIRONMENTAL EVALUATION NOTIFICATION FORM

To be completed by "Applicant," i.e., organization receiving funds and/or implementing Federal Actions as defined by 40 CFR § 1508.18. For assistance, refer to "Instructions for Preparing SC-CH F-560, Environmental Evaluation Notification Form."

Orgai	nizat	ion Name: Ames Laborato			
Title o	of Pr	oposed Project/Research:	Sensitive Instrument Facility		
Total	DOE	Funding/Total Project Fund	ding: \$9.9M		
1,	Pro	ject Description (use explai	nation page if additional space is required):		
	A.	Proposed Project/Action (i	f applicable, delineate Federally funded/Non-Federally funded portion	<u>s)</u>	
		vibration isolation, acoustic	Sensitive Instrument Facility (SIF) that will house scientific instrument c separation and control, electromagnetic interference control tight co ature and humidity control. The building will also house wet and dry s boms and staff support space. DOE BES has provided approximately this facility.	ntrol of ai ample	ir flow,
		BES a Justification of Nee followed by a large portion	the Ames Laboratory Annual Business Plan in 2011. After concurrenced statement was prepared and submitted to DOE. Initial funding was in FY2012. Preliminary site and floor plans have been provided to the detailed design will be submitted once complete.	sent in F	E- Y2011
		The facility is expected to remaining \$4.4M.	cost \$9.9M. DOE BES has already provided \$5.5M and is working to	supply th	e
	B.	Would the project proceed	without Federal funding?	Yes	No ⊠
		If "yes," use explanation	page.		
II.		scription of Affected Environ attached	ment:		

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111.	<u>P</u>	relimina	ary Questions:		
	A.	ls th	ne DOE-funded work routinely administrative or entirely advisory or a "paper study?"	Yes	No ⊠
		If "Y	Yes", ensure that the description in Section I reflects this and go directly to Section \	v.	
	B.	Is th	ere any potential whatsoever for:		
		Pro	vide an explanation for each "Yes" response.		
		1.	Work to be used with a second state of the sec	Yes	No
		2.	Work to be performed outdoors?	\boxtimes	
		3.	Major modification of a building interior?		\boxtimes
		٥.	Threat of violation of applicable statutory, regulatory, or permit requirements for		
		4.	environment, safety, and health?	THE TOTAL	
		-	Siting, construction or major expansion of waste treatment, storage, or disposal facilities?		\boxtimes
		5.			
		٠.	Disturbance to hazardous substances, pollutants, or contaminants preexisting in the environment?		\boxtimes
		6.		- 12	
		7.	The presence of any environmentally-sensitive resources?		\boxtimes
		8.	Potential for high consequence impacts to human health or the environment? The work being connected to another existing/proposed activity that could potentially	H	
			create a significant impact?		
		9.	Nearby past, present, and/or reasonably foreseeable future actions such that collectively significant impacts could result?		\boxtimes
		10.	Scientific or public controversy over whether impacts could be significant?		\boxtimes
		If "N	o" to ALL Section III.B. questions, go directly to Section V.		
IV.	Pol	antial F	Environmental Effects:		
14.			and by a large portion in FY2012, Preligiousy also and Book piece him before preligious		
	Pro	ovide a	n explanation for each "Yes" response.		
	A.	Sens	itive Resources: Could the proposed action potentially result in changes and/or disturbance	ee to an	, nf
		the fo	ollowing resources?		
		1.	Threatened/Endangered Species and/or Critical Habitats	Yes	No
		2.	Other Protected Species (e.g., Burros, Migratory Birds)		\boxtimes
		3.	Sensitive Environments (e.g., Tundra/Coral Reefs/Rain Forests)	H	\boxtimes
		4.	Cultural or Historic Resources	Н	\boxtimes
		5.	Important Farmland		\boxtimes
		6.	Non-Attainment Areas for Ambient Air Quality Standards		\boxtimes
		7.	Class I Air Quality Control Region	Ц	\boxtimes
		8.	Special Sources of Groundwater (e.g. Sole Source Aquifer)	H	\boxtimes
		9.	Navigable Air Space	H	\bowtie
		10.	Coastal Zones	H	\bowtie
		11.	Areas with Special National Designation (e.g. National Forests, Parks, Trails)	H	X
		12.	Floodplains and/or Wetlands	H	

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	В.		ated Substances/Activities: Would the proposed action	on involve any of the following regulat	ted Item	sor
		activiti	<u>es?</u>		Yes	No
		13.	Natural Resource Damage Assessments			X
		14.	Invasive Species or Exotic Organisms		H	X
		15.	Noxious Weeds			X
		16.	Clearing or Excavation (indicate if greater than one	acre)	H	X
		17.	Dredge or Fill (under Clean Water Act, Section 404	greater than one acre)	H	X
				, greater trial one acre)		
		18.	Noise (in excess of regulations)		H	K
		19.	Asbestos Removal		H	
		20.	Polychlorinated biphenyls (PCBs)	Name of the last o	H	
		21.	Import, Manufacture, or Processing of Toxic Substa	ances	H	
		22.	Chemical Storage/Use		H	
		23.	Pesticide Use		H	
		24.	Hazardous, Toxic, or Criteria Pollutant Air Emission	15	H	
		25.	Liquid Effluents		H	
		26.	Spill Prevention/Surface Water Protection			×
		27.	Underground Injection			\leq
		28.	Hazardous Waste		Ц	
		29.	Underground Storage Tanks			\boxtimes
		30.	Radioactive or Radioactive Mixed Waste			\boxtimes
		31.	Radiation Exposure			\boxtimes
		32.	Nanoscale Materials			\boxtimes
		33.	Genetically Engineered Microorganisms/Plants or S	Synthetic Biology?		\boxtimes
		34.	Ozone Depleting Substances	office formation to become A 10		\boxtimes
		35.	Greenhouse Gas Generation/Sustainability			\boxtimes
		36.	Off-Road Vehicles			\boxtimes
		37	Biosafety Level 3-4 Laboratory			\boxtimes
	C.	Other	Relevant Information: Would the proposed action inv	volve the following?	Yes	No
		38.	Existing, Modified, or New Federal/State Permits			N
		39.	Disproportionate Nearby Presence of Minority and/	or Law Income Populations	H	
			Astion/bushsment of Another Enderel Agency (a.s.	license/normit funding approval)	H	K
		40.	Action/Involvement of Another Federal Agency (e.g		H	
		41.	Action of a State Agency in a State with NEPA-type	e iaw	H	
		42.	Public Utilities/Services		\boxtimes	
		43.	Depletion of a Non-Renewable Resource		H	
		44.	Other Pertinent Information Which Could Impact He	uman Health or the Environment		M
V.	App	olicant C	ertification that to the best of their knowledge all info	rmation provided on this form is accur	rate:	
					Yes	No
			isclosure contain classified, confidential, or other exe			\boxtimes
	not	be oblig	ated to disclose pursuant to the Freedom of Informa	tion Act?		
	۸	Organ	ization Official (Name and Title): Mark Grootveld, N	Annager ERES		
	A.	Organi	Zation Official (Name and Title). Walk Grootveld, N	manager, FOES		
		Signat	was Marks Mist	Date: 6/18/13		
		Signal	die.///which	Date. 6/10/15		
		e-mail:	grootveld@ameslab.gov	Phone: 515-294-7895		
	B.	Option	al Secondary Approval (Name and Title): Dan Ka	yser, Environmental Specialist		
		Signat	ure: Daniel A. Karsen	Date: 6/19/2013		
			1 33.00			
		e-mail:	kayser@ameslab.gov	Phone: 515-294-7923		

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Remainder to be completed by DOE

1.	DC	DE Concurrence/Recommendation/Determination:		
	A.	DOE Project Director/Program Manager or Contract/Grant Management Specialist:	Yes	No
		Has the Applicant completed the Form correctly? Does an existing Generic Categorical Exclusion apply? If yes, indicate:		
		Name and Title:		
		Signature: Date:		
	B.	DOE NEPA Team Review:		
		Is the class of action identified in the DOE NEPA Regulations (Appendices A-D to Subpart D (10 CFR § 1021))? If yes, specify the class(es) of action: 1		No
		Name and Title:		
		Signature: Date:		
	C.	DOE Counsel (if requested):		
		Name and Title:		
	D.	DOE NEPA Compliance Officer:		
	The 102	preceding pages are a record of documentation required under DOE Final NEPA Req		
	X	Action may be categorically excluded from further NEPA review. I have determined action meets the requirements for Categorical Exclusion referenced above.	ined that the propo	sed
		Action requires approval by Head of the Field Organization. Recommend prepa Environmental Assessment.		
		Action requires approval by Head of the Field Organization or a Secretarial Office preparation of an Environmental Impact Statement.	er. Recommend	
		Comments/limitations if any:		
		NEPA Compliance Officer:		
		Name: Peter K. Stebaun		
		Signature: Date:	7/10/2013	3
		4	Page	4 of 4

Sensitive Instrument Facility Description for Form SC-CH-560

II. Description of Affected Environment

The project will construct a Sensitive Instrument Facility at the Applied Science Center (ASC) at Iowa State University in Ames, Iowa (see location map attached). The facility will be a one story structure of approximately 13,300 gross square feet (0.3 acres). It will be located adjacent to the Applied Science II building. The site was chosen for the following reasons:

- Low vibration and low electromagnetic interference (EMI).
- Availability of the site and its suitability for a "low density" building. Building sites on the
 central campus are very limited and reserved for higher density construction (e.g. 3-4
 story, 60,000 gsf).
- Adjacent to existing facilities in an area that has been developed.
- Utilities already extended to the overall ASC site.
- Potential for a buffer zone to protect it from the impact of future construction.

The building will be designed to house sensitive instruments such as electron microscopes. These instruments have very stringent requirements for vibration, EMI, acoustics, and temperature control. The building will include instrument rooms, control rooms, sample preparation labs, offices and electrical/mechanical equipment rooms. Building construction will be concrete and masonry construction. Because of the vibration requirements, the building will require a thicker concrete foundation slab and pilings to attenuate vibrations. Steam and compressed air utilities will be extend from the Applied Science II building to the new building. The electrical service and water service will be extended underground in trenches to the new building. The trenches for these services are estimated to be less than 800'. The site is relatively flat and will not require extensive earthwork. The excavation for the building is expected to be less than 3,000 yards³. Outside activities will be adjacent to existing buildings in areas that have already been disturbed.

The design criteria for the building targets LEED Gold Certification.

III. Preliminary Questions

B.1 Work to be performed outdoors

The facility will be a one story structure of approximately 13,300 gross square feet (0.3 acres). The excavation for the building is expected to be less than 3,000 yards³. Outside activities will be adjacent to existing buildings in areas that have already been disturbed.

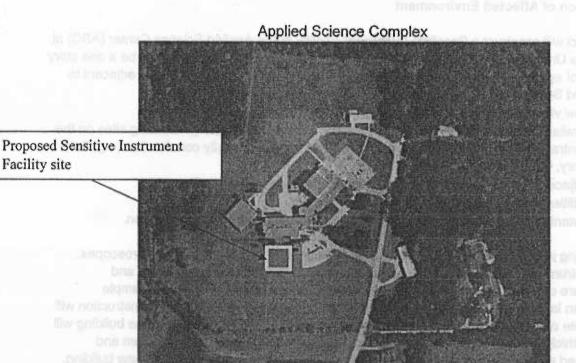
IV. Potential Environmental Effects

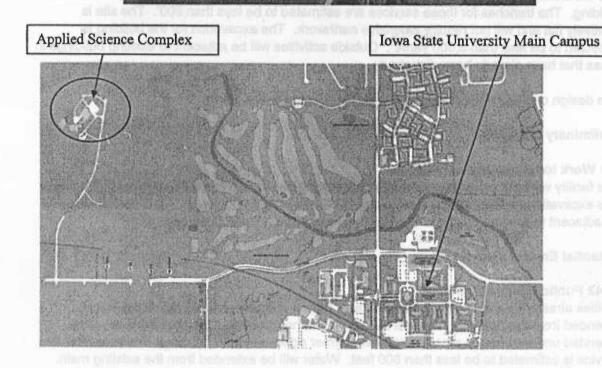
C. 42 Public Utilities/Services

Utilities already extend to the overall ASC site. Steam and compressed air utilities will be extended from the Applied Science II building to the new building. Electrical service will be extended underground to a pad mount transformer adjacent to the building. The trench for the service is estimated to be less than 800 feet. Water will be extended from the existing main. The trench for this service is estimated to be less than 800 feet. The sanitary drain will be extended to a manhole near the building site approximately 40 feet away.

Sensitive Instrument Facility Description for Form SC-CH-560







Facility site