

**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."

Solicitation/Award No. (if applicable): _____

Organization Name: Ames Laboratory

Title of Proposed Project/Research: Sensitive Instrument Facility

Total DOE Funding/Total Project Funding: \$9.9M

I. Project Description (use explanation page if additional space is required):

A. Proposed Project/Action (if applicable, delineate Federally funded/Non-Federally funded portions)

Project is to construct the Sensitive Instrument Facility (SIF) that will house scientific instruments that require vibration isolation, acoustic separation and control, electromagnetic interference control tight control of air flow, and strict ambient temperature and humidity control. The building will also house wet and dry sample preparation labs, control rooms and staff support space. DOE BES has provided approximately 55% of the funds needed to construct this facility.

The SIF was proposed in the Ames Laboratory Annual Business Plan in 2011. After concurrence by DOE-BES a Justification of Need statement was prepared and submitted to DOE. Initial funding was sent in FY2011 followed by a large portion in FY2012. Preliminary site and floor plans have been provided to the BES program office. The final detailed design will be submitted once complete.

The facility is expected to cost \$9.9M. DOE BES has already provided \$5.5M and is working to supply the remaining \$4.4M.

B. Would the project proceed without Federal funding?

Yes ☐ No ☒

If "yes," use explanation page.

II. Description of Affected Environment:
See attached

III. Preliminary Questions:

- A. Is the DOE-funded work routinely administrative or entirely advisory or a "paper study?"

Yes

☐

No

☒*If "Yes", ensure that the description in Section I reflects this and go directly to Section V.*

- B. Is there any potential whatsoever for:

Provide an explanation for each "Yes" response.

- | | Yes | No |
|--|-------------------------------------|-------------------------------------|
| 1. Work to be performed outdoors? | ☒ | ☐ |
| 2. Major modification of a building interior? | ☐ | ☒ |
| 3. Threat of violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health? | ☐ | ☒ |
| 4. Siting, construction or major expansion of waste treatment, storage, or disposal facilities? | ☐ | ☒ |
| 5. Disturbance to hazardous substances, pollutants, or contaminants preexisting in the environment? | ☐ | ☒ |
| 6. The presence of any environmentally-sensitive resources? | ☐ | ☒ |
| 7. Potential for high consequence impacts to human health or the environment? | ☐ | ☒ |
| 8. The work being connected to another existing/proposed activity that could potentially create a significant impact? | ☐ | ☒ |
| 9. Nearby past, present, and/or reasonably foreseeable future actions such that collectively significant impacts could result? | ☐ | ☒ |
| 10. Scientific or public controversy over whether impacts could be significant? | ☐ | ☒ |

If "No" to ALL Section III.B. questions, go directly to Section V.

IV. Potential Environmental Effects:

Provide an explanation for each "Yes" response.

- A. Sensitive Resources: Could the proposed action potentially result in changes and/or disturbances to any of the following resources?

- | | Yes | No |
|--|--------------------------|-------------------------------------|
| 1. Threatened/Endangered Species and/or Critical Habitats | ☐ | ☒ |
| 2. Other Protected Species (e.g., Burros, Migratory Birds) | ☐ | ☒ |
| 3. Sensitive Environments (e.g., Tundra/Coral Reefs/Rain Forests) | ☐ | ☒ |
| 4. Cultural or Historic Resources | ☐ | ☒ |
| 5. Important Farmland | ☐ | ☒ |
| 6. Non-Attainment Areas for Ambient Air Quality Standards | ☐ | ☒ |
| 7. Class I Air Quality Control Region | ☐ | ☒ |
| 8. Special Sources of Groundwater (e.g. Sole Source Aquifer) | ☐ | ☒ |
| 9. Navigable Air Space | ☐ | ☒ |
| 10. Coastal Zones | ☐ | ☒ |
| 11. Areas with Special National Designation (e.g. National Forests, Parks, Trails) | ☐ | ☒ |
| 12. Floodplains and/or Wetlands | ☐ | ☒ |

B. Regulated Substances/Activities: Would the proposed action involve any of the following regulated Items or activities?

	Yes	No
13. Natural Resource Damage Assessments	☐	☒
14. Invasive Species or Exotic Organisms	☐	☒
15. Noxious Weeds	☐	☒
16. Clearing or Excavation (indicate if greater than one acre)	☐	☒
17. Dredge or Fill (under Clean Water Act, Section 404, greater than one acre)	☐	☒
18. Noise (in excess of regulations)	☐	☒
19. Asbestos Removal	☐	☒
20. Polychlorinated biphenyls (PCBs)	☐	☒
21. Import, Manufacture, or Processing of Toxic Substances	☐	☒
22. Chemical Storage/Use	☐	☒
23. Pesticide Use	☐	☒
24. Hazardous, Toxic, or Criteria Pollutant Air Emissions	☐	☒
25. Liquid Effluents	☐	☒
26. Spill Prevention/Surface Water Protection	☐	☒
27. Underground Injection	☐	☒
28. Hazardous Waste	☐	☒
29. Underground Storage Tanks	☐	☒
30. Radioactive or Radioactive Mixed Waste	☐	☒
31. Radiation Exposure	☐	☒
32. Nanoscale Materials	☐	☒
33. Genetically Engineered Microorganisms/Plants or Synthetic Biology?	☐	☒
34. Ozone Depleting Substances	☐	☒
35. Greenhouse Gas Generation/Sustainability	☐	☒
36. Off-Road Vehicles	☐	☒
37. Biosafety Level 3-4 Laboratory	☐	☒

C. Other Relevant Information: Would the proposed action involve the following?

	Yes	No
38. Existing, Modified, or New Federal/State Permits	☐	☒
39. Disproportionate Nearby Presence of Minority and/or Low Income Populations	☐	☒
40. Action/Involvement of Another Federal Agency (e.g. license/permit, funding, approval)	☐	☒
41. Action of a State Agency in a State with NEPA-type law	☐	☒
42. Public Utilities/Services	☒	☐
43. Depletion of a Non-Renewable Resource	☐	☒
44. Other Pertinent Information Which Could Impact Human Health or the Environment	☐	☒

V. Applicant Certification that to the best of their knowledge all information provided on this form is accurate:

Does this disclosure contain classified, confidential, or other exempt information that DOE would not be obligated to disclose pursuant to the Freedom of Information Act?

Yes	No
☐	☒

A. Organization Official (Name and Title): Mark Grootveld, Manager, F&ES

Signature: Mark Grootveld Date: 6/18/13
e-mail: grootveld@ameslab.gov Phone: 515-294-7895

B. Optional Secondary Approval (Name and Title): Dan Kayser, Environmental Specialist

Signature: Daniel A. Kayser Date: 6/19/2013
e-mail: kayser@ameslab.gov Phone: 515-294-7923

Remainder to be completed by DOE**VI. DOE Concurrence/Recommendation/Determination:****A. DOE Project Director/Program Manager or Contract/Grant Management Specialist:**

Has the Applicant completed the Form correctly?

Yes

No

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))?

Yes

No

If yes, specify the class(es) of action: B3.6

Name and Title: _____

Signature: _____

Date: _____

C. DOE Counsel (if requested):

Name and Title: _____

Signature: _____

Date: _____

D. DOE NEPA Compliance Officer:

The preceding pages are a record of documentation required under DOE Final NEPA Regulation, 10 CFR § 1021.400.



Action may be categorically excluded from further NEPA review. I have determined that the proposed action meets the requirements for Categorical Exclusion referenced above.



Action requires approval by Head of the Field Organization. Recommend preparation of an Environmental Assessment.



Action requires approval by Head of the Field Organization or a Secretarial Officer. Recommend preparation of an Environmental Impact Statement.

Comments/limitations if any: _____

NEPA Compliance Officer:

Name: Peter R. SiebachSignature: Peter R. SiebachDate: 7/10/2013

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 extended 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**



Applied Science Complex

**Proposed Sensitive Instrument
Facility site**



Applied Science Complex

Iowa State University Main Campus

