



Department of Energy

Argonne Site Office
9800 South Cass Avenue
Argonne, Illinois 60439

JUL 22 2011

Dr. Eric Isaacs
Director, Argonne National Laboratory
President, UChicago Argonne, LLC
9700 South Cass Avenue
Argonne, IL 60439

Dear Dr. Isaacs:

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) DETERMINATION FOR
ARGONNE NATIONAL LABORATORY (ANL)

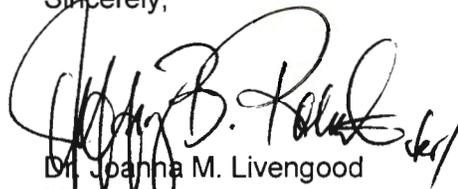
Argonne Site Office (ASO) has approved the following as a categorical exclusion (CX) under the category of "B 3.6 Siting/construction/operation/decommissioning of facilities for bench-scale research, conventional laboratory operations, small-scale research and development and pilot projects".

- Building 366 Expansion, Operation, and maintenance (ASO-CX-289)

Therefore, no further NEPA review is required. However, if any modification or an expansion of the scope is made to the above project, additional NEPA review will be necessary.

Enclosed please find a copy of the approved Environmental Review Form (ERF) for the project. If you have any questions please contact Kaushik Joshi of my staff at (630) 252-4226.

Sincerely,



Dr. Joanna M. Livengood
Manager

Enclosure:
As Stated

cc: M. Kamiya, ANL/ESQ, 201, w/encl.
S. Hunsberger, ANL/FMS, 222, w/encl.
H. Weerts, ANL/HEP, 362, w/encl.
P. Rash, ANL/FMS, 214, w/encl.
N. Van Wermeskerken, ANL/PSE, 208, w/encl.

Environmental Review Form for Argonne National Laboratory

Click on the blue question marks for instructions, contacts, and additional information on specific line items.

Project/Activity Title: Building 366 Expansion, Operation, and Maintenance

ASO NEPA Tracking No. _____ **Type of Funding:** IGPP

B&R Code _____

Identifying number: OPS-01095 WFO proposal # _____ CRADA proposal # _____

Work Project # 08121 ANL accounting # (item 3a in Field Work Proposal) _____

Other (explain) ESR 1328

Project Manager: Steve Hunsberger Signature: *Steve Hunsberger* Date: 7/5/11

Project Manager: H. Weerts Signature: *H. Weerts* Date: 7/5/11

NEPA Owner: Phil Rash Signature: *Phil Rash* Date: 7/5/11

NEPA Owner: ^{vaney}Van Wormesterken Signature: *Vaney & Wormesterken* Date: 7/5/11

ANL NEPA Reviewer: M. A. Kamiya Signature: *M. A. Kamiya* Date: 7/14/2011

I. Description of Proposed Action:

This action would extend Building 366 by constructing an addition approximately 60' X 63' X 30' high off the southeast side of the existing building, into the existing parking lot area. This would accommodate the extension of the Argonne Wakefield Accelerator (AWA) bunker and provide space that would be used to centralize many accelerator R&D functions.

AWA is used for advanced accelerator R&D on dielectric structures, two beam acceleration and, in general, for a very active accelerator science program with users from other labs and universities. This R&D activity is aimed at providing the basis for a future electron-positron high-energy linear collider.

II. Description of Affected Environment:

All the work would take place in previously disturbed areas outside and inside of Building 366. No impacts would occur to environmentally sensitive areas.

III. Potential Environmental Effects: (Attach explanation for each "yes" response. See Instructions for Completing Environmental Review Form)

A. Complete Section A for all projects.

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 Yes X No _____

2. Air Pollutant Emissions Construction activities that generate air emissions would be minimal and consist of vehicles and machines used in construction and maintenance operations. No collection or discharge of refrigerants would occur or would be added to the systems. The removal of asbestos insulation, by an outside contractor, would occur and would be handled Yes X No _____

per Argonne procedures. Two sections of steam and condensate piping with asbestos insulation (assumed 2" pipe diameter), totaling approximately 75 LF each, would be removed.

SF6 gas is used in normal operations in the waveguides pressurized at 14 psig. The leak rate in the current waveguide configuration is approximately 0.2 lb/hour. A system to recover this gas would be installed to minimize the loss into the environment. The gas would be removed from the waveguides when the facility is not in operation, thus gas emission would only occur during the time the accelerator is in operation.

Operations estimate an air release of 0.25 Ci/yr, therefore a new permit will be needed. Operations will not commence until the permit is approved.

3. Noise Yes No
Typical construction noise would be generated. All activities that may generate higher noise levels such as Construction and D&D would be evaluated and appropriate hearing protective equipment required as needed per Argonne procedures.

4. Chemical/Oil Storage/Use Yes No
Standard construction and maintenance chemicals would be used on-site. Construction industry chemicals such as gasoline, grease and oil may be used as well as standard cleaning chemicals. The materials would be stored in proper containers and protected from spillage. In addition, emergency clean-up plans would be in place in case of an accidental release.

No chemicals are used in the accelerator operation. Mineral oil is used in the klystron tanks, per standard procedure. Small amounts of cleaning solvents (ethanol and acetone) are used during the preparation and installation of vacuum components.

5. Pesticide Use Yes No
6. Polychlorinated Biphenyls (PCBs) Yes No
7. Biohazards Yes No
8. Liquid Effluent (wastewater) Yes No

These construction activities would require an Argonne Erosion Control Plan to ensure proper stormwater management. Any stormwater pumped from the foundation excavations would be filtered prior to discharge to grass surfaces near the work areas. Water collected from the piping systems during construction and operations would be collected and discharged to the laboratory sewer system located across the street or discharged to existing building lab or sanitary sewer systems inside the buildings. Untreated waste water would not be discharged to any storm water sewer system. Heavily chlorinated wastewater would be de-chlorinated prior to discharge to the laboratory

or sanitary sewer systems. The only anticipated discharges will be from the fire protection system.

There is tap water that flows through the laser system during operation, for cooling purposes, and then goes to the sanitary drain.

9. Waste Management

a) Construction or Demolition Waste

Yes No

Minimal debris would be generated from this action. Miscellaneous packaging materials would be recycled where possible. Excess soil, asphalt, etc. would be removed from the site. Excess gravel would be properly stockpiled and reused on the project or stored in the 362 Gravel Storage area.

b) Hazardous Waste

Yes No

c) Radioactive Mixed Waste

Yes No

d) Radioactive Waste

Yes No

e) PCB or Asbestos Waste

Yes No

Asbestos insulation would be disturbed during piping work inside Building 366. ANL procedures would be followed concerning the reporting, removal, and cleanup of subject waste.

f) Biological Waste

Yes No

g) No Path to Disposal Waste

Yes No

h) Nano-material Waste

Yes No

10. Radiation

Yes No

No special precautions are required for construction personnel working in or on the AWA bunker. Workers would not be allowed to work over the bunker when experiments are in progress.

Calculations for proposed work at higher energies give an estimated air release of 0.25 Ci/yr. An air permit will be applied for and operations of the facility will not commence until the permit is approved.

11. Threatened Violation of ES&H Regulations or Permit Requirements

Yes No

12. New or Modified Federal or State Permits

Yes No

With an estimated air release of 0.25 Ci/yr, a new permit will be needed. Operations will not commence until the permit is approved.

13. Siting, Construction, or Major Modification of Facility to Recover, Treat, Store, or Dispose of Waste

Yes No

14. Public Controversy

Yes No

15. Historic Structures and Objects

Yes No

16. Disturbance of Pre-existing Contamination

Yes No

17. Energy Efficiency, Resource Conserving, and Sustainable Design Features

Yes No

The building expansion would follow current Argonne standards for wall and roof insulation, roof material and SRI, and mechanical system design. The project would use recycled materials in the asphalt and concrete products. No LEED certification is anticipated.

B. For projects that will occur outdoors, complete Section B as well as Section A.

18. Threatened or Endangered Species, Critical Habitats, and/or other Protected Species Yes ___ No X
19. Wetlands Yes ___ No X
20. Floodplain Yes ___ No X
21. Landscaping Yes ___ No X
22. Navigable Air Space Yes ___ No X
23. Clearing or Excavation Yes X No ___
This action would excavate and recycle, asphalt, concrete, gravel, and earth. It is expected that approximately 20,000 CF of spoils would be removed and backfilled. An Erosion Control Plan would be developed and followed.
24. Archaeological Resources Yes ___ No X
25. Underground Injection Yes ___ No X
26. Underground Storage Tanks Yes ___ No X
27. Public Utilities or Services Yes ___ No X
28. Depletion of a Non-Renewable Resource Yes ___ No X

C. For projects occurring outside of ANL complete Section C as well as Sections A and B.

29. Prime, Unique, or Locally Important Farmland Yes ___ No ___
30. Special Sources of Groundwater (such as sole source aquifer) Yes ___ No ___
31. Coastal Zones Yes ___ No ___
32. Areas with Special National Designations (such as National Forests, Parks, or Trails) Yes ___ No ___
33. Action of a State Agency in a State with NEPA-type Law Yes ___ No ___
34. Class I Air Quality Control Region Yes ___ No ___

IV. Subpart D Determination: (to be completed by DOE/ASO)

Are there any extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal? Yes ___ No X

Is the project connected to other actions with potentially significant impacts or related to other proposed action with cumulatively significant impacts? Yes ___ No X

If yes, is a categorical exclusion determination precluded by 40 CFR 1506.1 or 10 CFR 1021.211? Yes ___ No ___

