

Environmental Aspects Procedure

The Ames Laboratory Environmental Aspects Procedure provides a method for identification of the Laboratory's aspects that impact the environment. It is used to rank the impact of each aspect so that objectives and targets can be set, as required by the Laboratory's Environmental Management System (EMS).

Comments and questions regarding this procedure should be directed to the contact person listed below:

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SIGN-OFF RECORD:

Approved by: _____ Date: _____
Tom Wessels, Manager, ESH&A

Approved by: _____ Date: _____
Andrea Spiker, Manager, Purchasing & Property Services

Approved by: _____ Date: _____
Mark Murphy, Chief Operations Officer

Approved by: _____ Date: _____
Dr. Bruce Harmon, Deputy Director

Approved by: _____ Date: _____
Dr. Alex King, Director

Note: Original Sign-off Record with signatures is on file with ESH&A

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1.0 Revision/Review Log

The Environmental Specialist will review this document every five years at a minimum.

Revision Number	Effective Date	Contact Person	Pages Affected	Description of Revision
0	10/06/03	D. Kayser	All	Initial Issue
1	11/12/07	D. Kayser	2	Increased review to five years.
2	06/15/09	D. Kayser	2, 3, 4	G:\DOCS&REC\DCPRevision Descriptions\Procedure 102_075
3	09/01/09	D. Kayser	1, 4	G:\DOCS&REC\DCPRevision Descriptions\Procedure 102_075
4	10/30/09	D. Kayser	4, 6	G:\DOCS&REC\DCPRevision Descriptions\Procedure 102_075

2.0 Purpose and Scope

The purpose of this procedure is to provide a method to identify and rank the Laboratory's environmental aspects and their significant impacts to the environment. Once this is established, objectives and targets can be determined as appropriate by upper management.

3.0 Prerequisite Actions and Requirements

3.1 Definitions

Environmental Aspect. An element of the Laboratory's activities, products or services that can interact with the environment.

Environmental Impact. Any change in the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products, or services.

Environmental Management System (EMS). A continual cycle of planning, implementing, reviewing and improving the actions that an organization takes to meet its environmental obligations.

EMS Steering Committee (EMSSC). A chartered group consisting of Science and Technology Division, Engineering Services Group, Facility Services Group, Purchasing and Property Services Group and the Environment, Safety, Health, and Assurance Group.

ESH&A. Environment, Safety, Health and Assurance.

ISO 14001. A widely accepted, official international standard for environmental management systems, released by the International Organization for Standardization.

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Objective. A goal that is consistent with the Laboratory’s environmental policy, priority environmental aspects, and applicable environmental regulations.

Target. A detailed performance requirement related to and supporting a specific objective. Such targets feature measurable parameters and timelines for attainment.

3.2 Training

Members of the EMS Steering Committee will receive materials (e.g. documents, links to web sites, discussions, examples, etc.) from the Environmental Specialist that will familiarize them with the EMS, including the listing and ranking of environmental aspects (e.g. electricity and paper usage). The Environmental Specialist or the chairperson of the EMSSC should have ISO14001 and formal EMS training.

4.0 Introduction Statement

The EMS Steering Committee will use this procedure to initially identify and rank, the Laboratory’s environmental aspects (e.g. electricity and paper usage), using the Environmental Aspects and Impacts Scoring Form B (Form 10200.146). Once this has been completed, existing systems (see section 6.0) will be utilized to identify any potential new aspects. This procedure may also be used to re-rank current aspects as needed (e.g. changes in regulations, mission, new DOE Orders, etc.).

5.0 Responsibilities

5.1 Upper Management (Ames Laboratory Executive Council):

Upper management will determine which objectives and targets to choose based on the EMSSC’s recommendations. Upper management will appoint and/or direct objectives and targets to the appropriate personnel as necessary. If funding is required to achieve those objectives and targets then upper management will provide the funding.

5.2 ESH&A Manager:

The manager will approve this procedure and ensure there are adequate resources necessary to support ESH&A’s role in meeting the objectives and targets of this procedure.

5.3 Environmental Specialist:

The specialist will chair the EMS Steering Committee. The Environmental Specialist is a member of the ESH&A staff.

5.4 Purchasing & Property Services Manager:

The manager is responsible for participating on or appointing someone to participate on the EMS Steering Committee and participate in committee meetings.

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5.5 EMS Steering Committee (EMSSC):

The EMSSC is responsible for: **1)** Forming a registry (list) of environmental aspects for the Laboratory. **2)** Ranking the impact of each aspect. **3)** Recommending objectives and targets to upper management, including suggested responsibility designations. **4)** Maintaining an up-to-date list of aspects. **5)** Reviewing the effectiveness of the EMS.

6.0 Laboratory Systems

The Laboratory's EMS covers many aspects, therefore there are several systems in place that capture activities that may affect the Laboratory's environmental aspects, targets, and goals. The Readiness Review Procedure (10200.010) can act as a check for EMS implications but the following systems are at the forefront of determining potential affects to the Laboratory's EMS. Each system is represented on the EMSSC.

6.1 Energy and Water Management:

Activities that could have an effect on energy and water management are screened through the Laboratory's Facility Services Department . The service order requisition (SOR) (Form 46200.036) is the primary mechanism for reviewing projects that could have an energy or water impact on the Laboratory's EMS aspects/goals and DOE goals. The Facilities Services Department has developed an Executable Plan to address the requirements of EO 13423 and DOE O 430.2B, and is therefore an appropriate body for reviewing energy and water management aspects

6.2 Acquisition and Green Product Designations:

Requisitions are reviewed through CostPoint, the Laboratory's electronic requisition system. Requisitions are reviewed by ESH&A for environmentally preferred products. The Purchasing Department's terms and conditions for commercial items contain energy star and energy efficient language. Credit card users are required to take the Laboratory's Purchasing Credit Card training (AL-201), which includes a review of environmentally preferred purchasing requirements. Data is captured for each fiscal year and reported to the DOE.

6.3 Pollution Prevention and Management of Toxic and Hazardous Materials:

Chemical requisitions are reviewed for safety and environmental concerns by ESH&A. Alternatives are recommended if the chemical poses significant safety, health or environmental risks. The Laboratory doesn't meet EPCRA (Emergency Planning & Community Right-to-Know Act) reporting thresholds, however, the Laboratory voluntarily reports to the Iowa EPCRA Coordinator as a best management practice. The Laboratory's Annual Site Environmental Report (http://www.ameslab.gov/esha/ESH&A_Documents/reportlist.html) provides more information on chemical reporting. Chemical users are encouraged to use the Laboratory's chemical inventory database (http://www.internal.ameslab.gov/esha/isu_access/toc/index.html) to find chemicals

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instead of purchasing chemicals when only a small amount is needed. Chemical users are also required to take the Laboratory's Hazardous Waste Generators institutional training (AL-073), which teaches users how to properly manage waste in laboratories and encourages recycling.

6.4 Solid Waste Diversion and Recycling:

The Laboratory recycles paper, fluorescent lamps, scrap metal, Styrofoam, batteries, phone books and oil. Recycling data is sent to the DOE at the end of each fiscal year. The Laboratory promotes the use of its chemical inventory database and the re-issuing of unused chemicals.

6.5 Sustainable Design/High Performance Buildings:

The Laboratory will seek LEED (Leadership in Energy and Environmental Design) Gold standard certification for any new buildings. The Laboratory's Executable Plan addresses this topic in greater detail.

6.6 Vehicle Fleet Management:

The Laboratory is exempt from vehicle fleet management as it does not have twenty or more vehicles in its fleet. The Laboratory has four GSA vehicles. The Laboratory does utilize fuel containing 85% ethanol and will continue to seek alternatives as they become operationally and economically feasible.

6.7 Electronics Stewardship:

The Laboratory purchases EPEAT (Electronic Product Environmental Assessment Tool) certified computers as much as possible. There may be instances where an EPEAT certified computer does not meet the requirements and/or needs of a research activity. Computer purchases are reviewed for EPEAT compliance by ESH&A. Data on computer purchases is rolled up to DOE at the end of each fiscal year. Outdated/expired computers and miscellaneous electronic equipment are sent offsite to an electronics recycler. Laboratory personnel are encouraged to use the Energy Star settings on their computers. The Laboratory's Information Systems baseline for setting up new computers includes enabling Energy Star features.

7.0 Performance

- The EMSSC will identify and prioritize the environmental aspects and impacts for the Ames Laboratory.
- Environmental aspects will be documented and prioritized using Forms A, B, and C in listed in Appendix A of this document.
- Each individual, from the EMSSC, will fill out Form A.
- After Form A is completed, the Environmental Specialist will consolidate the completed forms.

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- From the consolidated list, the EMSSC will score each aspect using Form B.
- The Environmental Specialist will rank the aspects and the impact from high to low scores using Form C.

- The list of environmental aspects will be electronically stored on the ESH&A group drive as G:\Environmental\EMS Stuff\Aspects.
- An up-to-date list of aspects will be maintained.
- The EMSSC will recommend objectives and targets to upper management.
- The EMSSC will include suggested responsibility designations when recommending EMS objectives and targets to upper management.
- The Environmental Specialist will provide cost estimates associated with fulfilling objectives, that require funding, to achieve EMS targets, to Upper Management.
- The Ames Laboratory Executive Council will determine which objectives and targets are appropriate and which will be selected for implementation.

8.0 References

“ISO 14001 Environmental Certification Step by Step”, A.J. Edwards, 2001
College and University Environmental Management System Draft Guide, dated October 2001.
<http://www.hss.energy.gov/nuclearsafety/env/ems/>

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APPENDIX A

FORMS

- Environmental Aspects and Impacts Form A (Form 10200.145)
- Environmental Aspects and Impacts Scoring Form B (Form 10200.146)
- Aspects Summary Form C (Form 10200.147)