

Contact Person	Sarah Morris-Benavides	Revision	1.1
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Environmental Management System Description

The Environmental Management System (EMS) Description plan is used to document the Laboratory's EMS in accordance with the ISO14001:2004 standard.

1.0 APPROVAL RECORD

- Reviewed by: Training & Documents, QA Coordinator (Molly Granseth)
- Approved by: Manager, Environment, Safety, Health & Assurance (Sean Whalen)
- Approved by: Chief Operations Officer (Mark Murphy)
- Approved by: Associate Director for Sponsored Research Administration (Deb Covey)
- Approved by: Assistant Director for Scientific Planning (Cynthia Jenks)
- Approved by: Chief Research Officer (Duane Johnson)
- Approved by: Deputy Director (Tom Lograsso)
- Approved by: Laboratory Director (Adam Schwartz)

The official approval record for this document is maintained by Training & Documents.

2.0 REVISION/REVIEW INFORMATION

In accordance with the Ames Laboratory Document Control program, this plan will be reviewed every three years. The revision description for this document is available from and maintained by the author.

3.0 PURPOSE AND SCOPE

The purpose of this document is to demonstrate the Laboratory's EMS compliance with ISO14001:2004 and DOE O 436.1.

3.1. Definitions

- *Continual Improvement*: Recurring process of enhancing the environmental management system in order to achieve improvements in overall environmental performance consistent with the organization's environmental policy.
- *Environment*: Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation.
- *Environmental Aspect*: Element of an organization's activities or products or services that can interact with the environment.
- *Environmental Impact*: Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects.
- *Environmental Management System (EMS)*: Part of an organization's management system used to develop and implement its environmental policy and manage its environmental aspects.
- *Environmental Objective*: Overall environmental goal, consistent with the environmental policy that an organization sets itself to achieve.

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- *Environmental Target:* Detailed performance requirement, applicable to the organization or parts thereof, that arises from the environmental objective and that needs to be set and met in order to achieve those objectives.

4.0 GENERAL REQUIREMENTS

The Laboratory will establish, document, implement, maintain and continually improve its environmental management system in accordance with the requirements of the ISO14001:2004 standard. The scope of the Laboratory's environmental management system includes the Ames Laboratory research, administrative, and support activities and associated buildings.

4.1 Environmental Policy

The Laboratory has established an [Integrated Safety Management System \(ISMS\) Policy and Plan](#) (10200.016). The EMS has been fully integrated into the Laboratory's ISMS. The Policy and Plan is available to the public on the Laboratory's webpage.

4.2 Planning

4.2.1 Environmental Aspects

The Laboratory has an established procedure, the [Environmental Aspects Procedure](#) (10200.075), for initially identifying the Laboratory's impacts and significant aspects. The list of aspects will be reviewed, at a minimum, every two years. The Laboratory will rely on established plans, policies and procedures for identifying aspects that have or could have an impact on the environment. See Section 5 of this plan for resource documents.

4.2.2 Legal and other Requirements

The Laboratory has a set of regulations and requirements that are established in the Laboratory's contract. The EMS Coordinator is responsible for identifying and maintaining compliance with EMS applicable regulations and requirements.

4.2.3 Objectives, Targets, and Programs

The Laboratory has adopted the Department of Energy's objectives (aka goals) as required by Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*. Annual Laboratory results are documented in the Laboratory's Site Sustainability Plan. The Environmental Management Steering Committee may identify and propose additional goals or targets based on the Laboratory's environmental policy, significant aspects, and/or legal and other requirements, to the Executive Council annually. These goals or targets are tracked to completion within the Ames Laboratory Corrective Action Tracking System (ALCATS).

4.3 Implementation and Operation

4.3.1 Roles and Responsibilities

Executive Council:

- Ensures the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialized skills, organizational infrastructure, technology and financial resources.
- Appoints an EMS Coordinator who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for implementing and maintaining the Laboratory's EMS.

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- Reviews the Laboratory's EMS, at a minimum every three years, to ensure its continued effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy, objectives and targets. Records (i.e. meeting minutes) of such reviews shall be retained by the Executive Council.

EMS Coordinator:

- Ensures that an environmental management system is established, implemented, and maintained with the requirements of ISO14001:2004.
- Reports to the Executive Council at least semi-annually on the performance of the EMS for review, including recommendations for improvement.
- Identifies and maintains compliance with applicable regulations and requirements and takes these regulations and requirements into account when establishing the Laboratory's aspects.

EMS Steering Committee (EMSSC):

- The EMSSC's responsibilities are outlined in the [Environmental Management System Steering Committee Charter](#) (10200.001).

Employees:

- Conduct their work in an environmentally sound manner. Employees are not required to know the formal EMS terminology. Employees will understand the intended spirit of the EMS, how their work may impact the environment, and will take necessary measures to eliminate and/or reduce such impact(s).

4.3.2 *Competence, Training and Awareness*

Employees will receive EMS training through General Employee Training. EMS Steering Committee members, Division/Institute/Program Directors and department managers, and Executive Council will receive additional training: Ames Laboratory Environmental Management System (AL-243).

4.3.3 *Communication*

EMS/sustainable communications are internally and externally communicated through Ames Laboratory *Insider* publications, the Laboratory's website, emails, the Annual Site Environmental Report, Site Sustainability Plan, and the Performance Evaluation Management Plan (PEMP).

4.3.4 *Documentation and Document Control*

Laboratory plans, policies, procedures, and forms are reviewed, tracked and maintained by the Document Control Office. Each subject matter expert (SME)/author is responsible for keeping their plans, policies and procedures current. Ancillary documentation (e.g. meeting minutes) associated with the EMS is maintained by each responsible party (i.e. EMS Coordinator, Executive Council, etc.).

4.3.5 *Operational Control*

The EMS is integrated into the Laboratory's Integrated Safety Management System (ISMS). The following forms, plans, policies and procedures are at the core of keeping

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the Laboratory from deviating from its ISMS/EMS policy. See Section 5 for a more complete listing of resource documents.

- 1) National Environmental Policy Act (NEPA) Plan: The NEPA plan is at the forefront of capturing potential activities that could affect the Laboratory's significant aspects.
- 2) Training Needs Questionnaire (TNQ): This form is used to identify training needs based on the job title/description for personnel.
- 3) Preliminary Proposal Form (PPF): This form is used to evaluate whether the proposed work will require an Environmental Evaluation Notification Form (CH-560) or is covered by one of the Categorical Exclusions maintained by the Laboratory.
- 4) Readiness Review Procedure (RRP): The readiness review is at the core of evaluating activities (new and current) at the Laboratory. The RRP evaluates activities for environmental, health and safety aspects.
- 5) Program/Department Walk-Through: Annual walk-throughs are performed in laboratory spaces to ensure that environmental, health and safety concerns are identified and corrected.

In addition to these plans and procedures, the Laboratory also has internal procedures (written and unwritten) that help identify and prevent adverse impacts to the environment (e.g. Service Order Requisitions (SORs), "Green Tag Procedure").

4.3.6 *Emergency Preparedness and Response*

The Laboratory's Facilities and Engineering Services Group maintains the Laboratory's Emergency Plan. Key emergency management personnel are trained on an annual basis. The Laboratory also files Emergency Planning and Community Right-to-Know Act (EPCRA) Tier II forms with the State of Iowa and the local fire department. Plant Protection personnel tour the facilities routinely and are onsite 24/7/365.

4.4 **Checking**

4.4.1 *Monitoring and Measurement*

The Laboratory has two Iowa Department of Natural Resources (IDNR) air permitted sources, a sandblaster and paint booth, which do not require continuous monitoring or monitoring while in operation. The permits are maintained by mass balance spreadsheets. Chemical fume hoods are exempt from permitting per the IDNR who maintains the authority for the Clean Air Act (CAA) in Iowa. The PPF, NEPA and Readiness Review would capture any new or significant changes that may have an impact on the environment or require a permit. The Laboratory's waste water is included in the University's waste water.

4.4.2 *Evaluation and Compliance*

Applicable regulations and requirements typically flow down from DOE-HSS (Office of Health, Safety and Security). A list of applicable regulations and requirements are in the Laboratory's contract between DOE and Iowa State University (ISU). The ESH&A Manager maintains this list and the SME responsible for each regulation and requirement. Other resources such ISU's EH&S department, list serves, and the attendance of webinars and workshops help keep the Environmental Specialist/EMS

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Coordinator abreast of new and/or changing regulations and requirements that may have an impact on the Laboratory's EMS.

Compliance is evaluated through several different mechanisms, such as the Site Environmental Report, Topical Appraisals, Program/Department Walk-Throughs, and site visits that occur during the Readiness Review Procedure. See section 5 for resource documents.

4.4.3 *Nonconformity, Corrective Action and Preventive Action*

The Industrial Safety Specialist maintains the Ames Laboratory Corrective Action Tracking (ALCATS) database. Findings and corrective actions are noted and tracked until they are closed.

4.4.4 *Control of Records*

Laboratory plans, policies, procedures and forms are tracked by the Document Control program. Ancillary documentation (e.g. meeting minutes) associated with the EMS are maintained by each responsible party (i.e. EMS Coordinator, Executive Council, etc.).

4.4.5 *Internal Audit*

An internal audit, in the form of a Topical Appraisal, will be conducted every three years, or more frequently if the Laboratory's significant aspects change. The triennial Topical Appraisal shall be performed approximately mid-way through the cycle of DOE External EMS Review. The appraisal team will include at least one member from outside the Laboratory. Results of this audit and/or change in significant aspects will be communicated to the Executive Council.

4.5 **Management Review**

The Executive Council shall formally review the Laboratory's EMS every three years for continued sustainability and effectiveness. Reviews shall include: assessing opportunities for improvement, environmental policy, environmental objectives and targets, final review of the internal audit Topical Appraisal and approval of resultant corrective actions. The Executive Council shall retain records (i.e. meeting minutes) of such reviews.

5.0 **RESOURCE DOCUMENTS**

Environmental Management System Steering Committee	Charter 10200.001
Preliminary Proposal Form	Form 10100.001
Readiness Review Hazard Identification Checklist	Form 10200.003
Waste Management Program	Manual 10200.003
Integrated Safety Management System (ISMS) Policy and Plan	Plan 10200.016
Waste Management Contingency Plan	Plan 10200.017

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Topical Appraisals	Plan 10200.022
Waste Minimization/Pollution Prevention	Plan 10200.023
National Environmental Policy Act (NEPA)	Plan 10200.025
Radioactive Waste Management Basis	Plan 10200.033
Spill Prevention, Control & Countermeasure (SPCC)	Plan 10200.037
Environmental Radiological Protection Program	Plan 10200.041
Ames Laboratory Emergency Plan*	Plan 46300.001
Stop Work Authority	Policy 10200.005
Readiness Review	Procedure 10200.010
Program/Department Walk-Through	Procedure 10200.014
Independent Walk-Through	Procedure 10200.021
Corrective Action Development, Tracking, and Verification	Procedure 10200.039
Waste Management Contingency Procedure*	Procedure 10200.044
Hazard Identification for Excess Property and Materials	Procedure 10200.054
Environmental Aspects	Procedure 10200.075