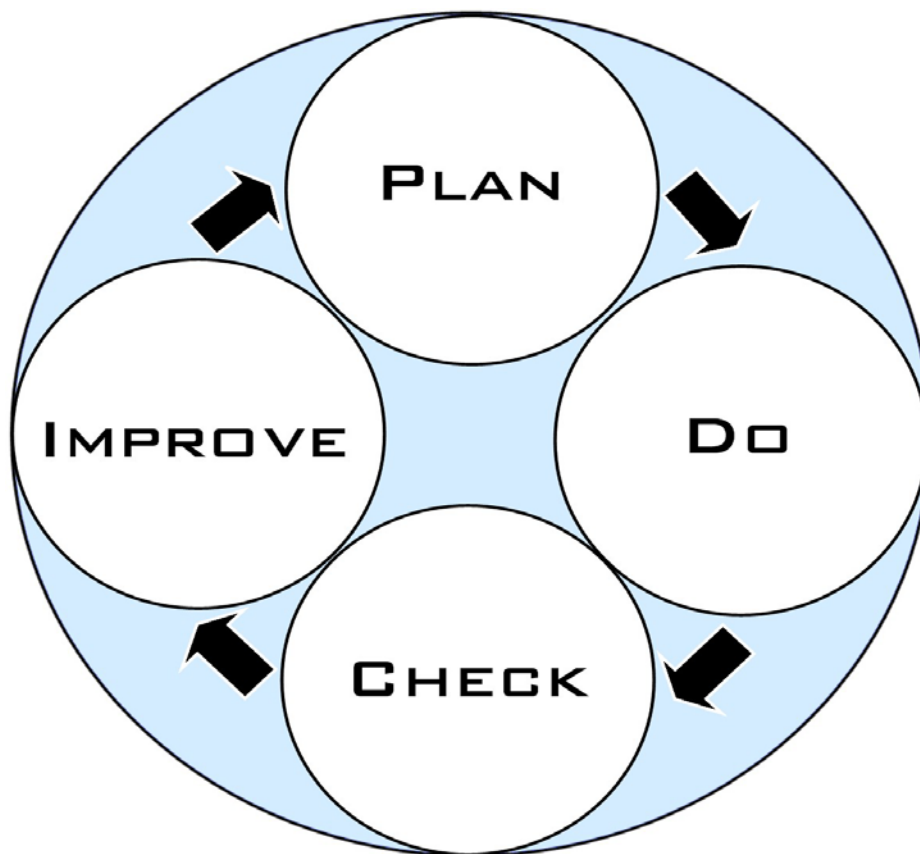USDA ars

ENVIRONMENTAL MANAGEMENT SYSTEM

IMPLEMENTATION GUIDE

United States Department of Agriculture
Agricultural Research Service

January 2005

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ENCLOSURES

1. Introduction

Executive Order (E.O.) 13148, "Greening the Government Through Leadership in Environmental Management," *requires each Federal agency to develop and implement an Environmental Management System (EMS) by December 31, 2005*. The E.O. mandates that Agencies designate "appropriate facilities" to establish environmental management systems. Appropriate facilities are those that have the potential to impact the environment. Because of the Agency's research mission, *all Areas and locations are designated "appropriate facilities" and are required to have an EMS in place*.

The purpose of this guide is to serve as an overall Agency strategy and provide Agricultural Research Service (ARS) Areas/locations a "road map" for developing, implementing, and maintaining a successful EMS. Areas/locations are free to utilize other suitable frameworks and standards such as the Code of Environmental Management Principles (CEMP), International Organization for Standardization (ISO) 14001, etc. However, the EMS must incorporate the policies and principles outlined in ARS' policy statement (i.e., Section 4 of this guide) as well as with Research, Education and Economics (REE) Manual 230.0, "Safety, Health and Environmental Management Program."

What is an EMS?

An EMS is a recognized, sound, business practice, designed to increase effectiveness and efficiency through better management of environmental issues. It is a continual cycle of planning, implementing, reviewing, and improving, analogous to the "Plan, Do, Check, Improve" model introduced by the early pioneers of quality partnership. This framework allows an organization to consistently address the effects its operations may have on the environment and supports the concept of continual improvement.

ARS has developed and is maintaining an EMS to ensure that we:

- continue to provide a safe, healthy workplace for our employees and act as a responsible member of our community;

- meet or exceed all applicable environmental standards; and,
- reduce pollution by employing sustainable pollution prevention and conservation practices.

2. Instructions on How to Use This Guide

This guide is designed to assist Areas/locations in developing *a proactive management model* to efficiently and effectively address environmental concerns. It is also intended to assist in identifying the environmental impacts our operations and facilities have so that the risks they pose to employees, the surrounding community, and the environment, may be reduced or eliminated.

The Agency's EMS Policy Statement, found in Section 4, serves as the foundation for this guide. Subsequent sections (i.e., Section's 5 through 14) expand upon each of the elements found in the policy statement. These sections provide information on the Agency's environmental management program and serve as a "road map" for Areas/locations to develop, implement, and maintain a successful EMS.

3. Definitions

Appropriate facility: A location whose activities or operations have a potential to impact the environment. All ARS Areas/locations are considered "appropriate facilities."

Environmental aspect: An element of ARS' activities or services that can or does interact with the environment (i.e., create an environmental impact).

Environmental impact: Any change to the environment, whether adverse or beneficial, resulting from ARS activities or services.

Environmental Management System (EMS): A framework that allows an organization to consistently address the effects its operations may have on the environment.

Location Senior Management Official: The highest ranking Official at the location, whether it is the Location Coordinator, Laboratory Director, Center Director, or Research Leader.

4. ARS EMS Policy Statement

The following pages contain the Agency's EMS policy statement as signed by James H. Bradley, Deputy Administrator, on June 28, 2004. The policy statement will be reviewed annually and updated as necessary.

JUN   28   2004

SUBJECT: ARS Environmental Management
              System Policy Statement

     TO: Area Directors

  FROM: James H. Bradley   /s/ James H. Bradley
              Deputy Administrator
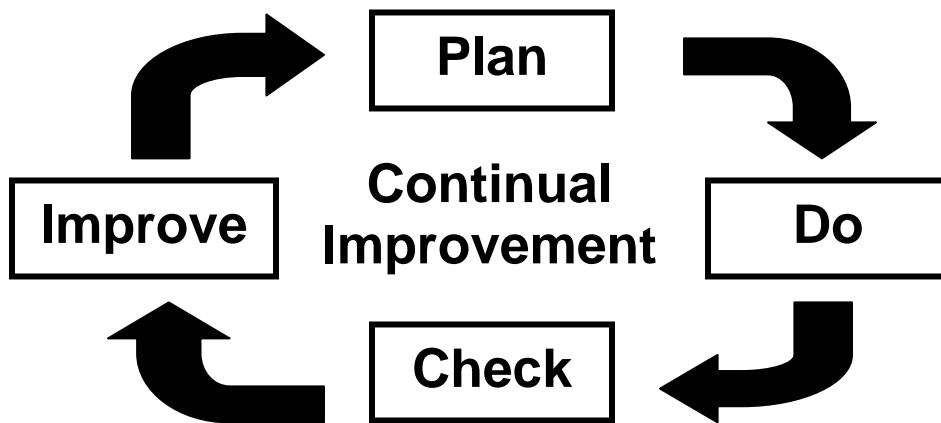

Executive Order (E.O.) 13148, "Greening the Government Through Leadership in
Environmental Management," requires each Federal agency to develop and implement an
Environmental Management System (EMS) at its locations by December 31, 2005. An
EMS is a framework that allows an organization to consistently address the effects its
operations may have on the environment. The foundation of a successful EMS includes
the development and maintenance of an effective policy statement.

Enclosed for your use is the Agricultural Research Service's (ARS) EMS Policy
Statement. This policy statement documents the Agency's principle environmental
commitments and provides a framework for establishing environmental goals and
objectives. The policy was developed by a team of safety, health, and environmental
professionals within the Agency. We would like to thank the following team members
for their input:

- Pete Jovanovich, Team Leader
- Lori Miller, Team Member
- Elsa Payne, Team Member
- Jim Simmons, Team Member
- Nora Spiller, Team Member
- John Van de Vaarst, Team Sponsor

Please disseminate and communicate this policy throughout your organization. This policy will be made available on the ARS, Administrative and Financial Management Web site at http://www.afm.ars.usda.gov/fd/SHEMB.HTM and will be maintained by the Facilities Division (FD), Safety, Health and Environmental Management Branch (SHEMB).

Within the next 6 months, the committee will publish an implementation guide to assist in developing location EMS'. It should be noted that many of the EMS requirements already exist and will not require a major overhaul of your current program.

We greatly appreciate your commitment and support as we continue to make systematic environmental management an integral part of our day-to-day decisionmaking and operational processes. This important step will further enhance mission performance and the effective use of our resources.

If you have any questions, please contact your Area Safety and Health Manager, or you may contact Terry L. Roark, Chief, SHEMB, FD, on 301-504-1248.

Enclosure

cc: w/encl.
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J. Simmons, SPA
Area Administrative Officers
Area Safety and Health Managers

Agricultural Research Service
Environmental Management System
Policy Statement

The Agricultural Research Service (ARS) conducts research to develop solutions to agricultural problems of high national priority. In conjunction with this mission, ARS is committed to protecting human health and the environment; meeting or exceeding Federal, State, and local laws, regulations, codes, and guidelines; and employing sustainable pollution prevention practices. Whenever feasible, ARS will utilize pollution prevention initiatives as the means for achieving compliance. We will strive to minimize impacts and continually improve our environmental performance by:

- Maintaining a policy of commitment to environmental excellence.

- Developing annual goals, objectives, and targets to advance our program performance in terms of both regulated and unregulated impacts.

- Considering environmental impacts when making policy, planning, purchasing, and operating decisions.

- Identifying and complying with pertinent requirements in Federal, State, and local laws and regulations; permits; Department of Agriculture and ARS policies and procedures; and industry codes that we must adhere to.

- Requesting the necessary resources to successfully carry out our goals, objectives, and targets.

- Making personnel aware of their environmental roles and responsibilities, providing appropriate training, and holding employees accountable for their performance and actions, including recognizing them for outstanding performance.

- Effectively communicating with employees, partners, stakeholders, customers, and the general public, our commitment to the environment and soliciting their input in developing and achieving our goals and objectives.

- Routinely monitoring our environmental operations and conducting periodic inspections, audits, and reviews to ascertain that we meet applicable standards and to evaluate our program effectiveness.

- Correcting identified deficiencies in a timely manner and taking appropriate steps to prevent their recurrence.

- Clearly documenting and reporting the progress and achievements related to this policy.

5. Maintaining a Policy of Commitment to Environmental Excellence

Each Area/location is required to develop and maintain an EMS policy statement. A policy statement is a declaration of top management's commitment to the environment. It should be specific to the Area/location by reflecting the activities and environmental impacts that occur there. Area/location policy statements also, at a minimum, must contain a commitment to:

- environmental compliance;
- pollution prevention and conservation practices; and,
- continual improvement.

The policy statement should be signed by the Area Director/Location Senior Management Official and communicated to all Area/location personnel as well as to the general public. The policy statement should be reviewed annually and updated as necessary.

ARS' policy statement, found in Section 4 above, serves as the Agency's framework for setting environmental goals, objectives, and targets. While Area/location policy statements may take on a different format/appearance (e.g., such as International Organization for Standardization 14001 EMS standards or the Code of Environmental Management Principles), a successful EMS will address each of the elements within the Agency's policy statement.

6. Developing Annual Goals, Objectives, and Targets to Advance Our Program Performance in Terms of Both Regulated and Unregulated Impacts

In order to continually improve the environmental program, *each Area/location is responsible for developing annual goals, objectives, and targets.* Per REE Manual 230.0, goals, objectives, and targets will be developed by November 30th each year and should be approved and endorsed by the senior management official within the organizational unit (e.g., the Research Leader at the location level).

Goals, objectives, and targets should be clear, specific statements of measurable results that are to be accomplished within a specified time period (i.e., a plan of action with milestones). They should be based in part on:

- Significant environmental impacts associated with facility and research-related operations (i.e., see Section 7, "Aspects and Impacts" below).

- Deficiencies noted by employees discovered during day-to-day monitoring activities.
- Regulatory issues and trends discovered during internal and external inspections, reviews, or audits.
- Pollution prevention and conservation initiatives.
- Agency-wide emphasis programs.

Whenever feasible, Areas/locations should utilize pollution prevention initiatives as the means for achieving compliance.

It should be noted that the Occupational Safety and Health Administration (OSHA) also requires the development of annual goals and objectives. These are to be based on the analysis of trends from injuries/illnesses that occurred during the previous year (i.e., documented on OSHA Form 300A, "Summary of Work-Related Injuries and Illnesses.") *Areas/locations may integrate the goals and objectives formulated under the OSHA requirement with those established under E.O. 13148 to create a single, congruent document.*

Goals and objectives provide a basis for resource allocation. The Agency's priority for setting goals and objectives, in descending order, follows:

1. Requirements needed to address a threat to human health.
2. Requirements needed to address a threat to the environment.
3. Requirements needed to support a signed Consent Decree, Order, or similar legally binding agreement.
4. Requirements needed to correct deficiencies cited in a regulatory inspection, notice of violation, or equivalent.
5. Requirements needed to bring the Agency into compliance with regulatory standards.
6. Requirements needed to meet a regulatory standard with a future compliance date.
7. Requirements needed to meet a proposed regulatory standard.
8. Other requirements that meet established standards but will demonstrate environmental leadership.

When requirements have competing priorities and resources are limited, Areas/locations should seek to complete all requirements to a level that will eliminate or reduce the immediate concern until additional resources can be secured. Areas/locations should also consider the potential for reduced operating costs when establishing priorities.

7. Considering Environmental Impacts When Making Policy, Planning, Purchasing, and Operating Decisions

Areas/locations need to consider the environmental consequences of their actions when making policy, planning, purchasing, and operating decisions. The Agency has a number of existing programs to assist Areas/locations with these decisions, which are discussed below.

Policy

There are a number of "Greening" E.O.'s that were passed in the late 1990's. The Agency has incorporated the requirements of these E.O.'s into REE Policies and Procedures as follows:

- *E.O. 13148, Greening the Government through Environmental Leadership*. A number of the provisions required under this E.O. are covered in this Guide. Additional objectives of this E.O. include:

    1. Phase out class 1 ozone depleting substances by December 31, 2010.
    2. Implement acquisition/procurement practices for beneficial landscaping.
    3. Implement acquisition/procurement practices for environmentally benign adhesives.
    4. Reduce the use of priority chemicals 50 percent by December 31, 2006.
    5. Reduce Toxic Release Inventory (TRI) releases and off-site transfers of toxic chemicals for treatment and disposal by 10 percent annually, or by 40 percent overall by December 31, 2006.

    Both FD and Acquisition and Property Division (APD) implement this E.O. The policy related to the above provisions is located in REE Manual 230.0; ARS Manual 242.1, Facility Design Standards; and, APD Policy Memorandum 23-02A, Energy Initiatives.

- *E.O. 13101, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition*. The objective of this E.O. is to improve waste reduction activities, recycling, and the purchase and use of recycled content and biobased and environmentally preferable products and services. APD implements this E.O. The policy related to this E.O. is located in APD Policy Memorandum 23-02A.

- *E.O. 13123, Greening the Government through Efficient Energy Management*. The objective of this E.O. is to reduce energy consumption and building greenhouse gas emissions 30 percent by 2010, compared to 1990 levels, by: reducing facility use of petroleum products; reducing water consumption; and, operating energy-efficient facilities. Both FD and APD implement this E.O. *FD serves as the primary liaison regarding* energy and water conservation activities for facilities within the Agency. *APD serves as the primary liaison regarding:* energy-efficient equipment procurement; reduction of fuel consumption in motor vehicles; use of alternative fuels; acquisition of alternative fuel vehicles; and, implementation of the Energy Savings Performance Contract (ESPC) program.

ARS policy related to this E.O. is located in REE Manual 212.20M, Energy Savings Performance Contracts and APD Policy Memorandum 23-02A.

- *E.O. 13134, Developing and Promoting Biobased Products and Bioenergy*. The objectives of this E.O. are to:

  1. Increase the use of agricultural commodities and develop new markets.
  2. Provide income to farmers and increase employment.
  3. Enhance energy security and economic security.
  4. Increase environmental benefits and reduce greenhouse gases.
  5. Increase production and use of biobased products and bioenergy 30 percent by 2010 compared to 1999 base year.

  This E.O. is implemented by the National Program Staff within the Office of Technology Transfer. ARS policy related to this E.O. is located in APD Policy Memorandum 23-02A.

- *E.O. 13149, Greening the Government through Federal Fleet and Transportation Efficiency*. The objectives of this E.O. are to:

  1. Reduce annual vehicle fleet petroleum consumption by 20 percent at the end of 2005, as compared to 1999 levels.
  2. Increase average Environmental Protection Agency (EPA) fuel economy rating of passenger cars and light trucks by 3 miles per gallon by the end of 2005.
  3. Reduce petroleum fuel consumption through the acquisition of alternative fuel vehicles (AFV's), as required by section 303 of the Energy Policy Act of 1992.
  4. Use alternative fuels (i.e., majority of purchases by end of FY 2005).
  5. Acquire higher fuel economy vehicles and reduce the number of vehicles.

  This E.O. is implemented by APD. ARS policy related to this E.O. is located in APD Policy Memorandum 23-02A.

Planning

Facilities Design/Construction. Environmental guidance for ARS facility design/construction projects is established in ARS Manual 242.1. Additional National Environmental Policy Act guidance can also be found in REE Manual 230.0.   The policies provided in these documents are to be followed whether the design/construction project is accomplished by FD, Area, or location.

Research. Environmental considerations for ARS research programs is provided in the CRIS project planning process. This process requires that new research be evaluated for environmental impacts, and that impacts be reevaluated every 5 years or when an operation changes.

Purchasing

ARS guidance on environmentally friendly purchasing can be found in APD Policy Memorandum 23-02A.

Operations

E.O. 13148 requires locations to develop a list of all activities associated with facility and research-related operations and identify the significant aspects of those activities that have an impact on the environment. Do they produce waste? Do they impact the land, water, and air? Are hazardous materials involved? Are operations conducted in ecologically sensitive areas? How much water and energy are used?

Examples of activities that have *aspects* that could potentially *impact* the environment include: laboratory research, field research, office work, engineering shop operations, building operations, and vehicle or equipment maintenance. These activities may impact the environment through: the utilization of chemical, radioactive, or biological substances; waste generation; air emissions; waste water discharges; storm water discharges; energy consumption; water consumption; office product consumption; vehicle fuel consumption and exhaust emissions; noise; etc.

Enclosure 1, "List of Potential Location Research Program and Facility Activities, Aspects and Their Impacts on the Environment," is a partial list of typical research/laboratory activities and the aspects and impacts associated with those activities.[1] This list serves as a starting point; it is not a comprehensive list. Each location should complete a thorough investigation of their specific activities, aspects, and impacts and work to eliminate or minimize the *significant* impacts identified.

8. Identifying and Complying with Pertinent Requirements in Federal, State, and Local Laws and Regulations; Permits; Department of Agriculture and ARS Policies and Procedures; and Industry Codes That We Must Adhere To

ARS is committed to complying with all applicable environmental regulations. In order to achieve and maintain compliance, each Area/location must be aware of the regulations and how they *may* apply to their facilities/operations.

The list of all possible standards for a given location can be extensive. Federal regulatory agencies can delegate authority for implementing and enforcing environmental standards to State and local Governments, provided that, at a minimum, they *adopt* the Federal

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[1] Based on information provided by the North Atlantic Area.

standards. State and local Governments may choose to *enact* standards that are *more stringent* than Federal regulations. Per REE Manual 230.0, when there are varying standards, the more stringent requirement applies.

It is therefore essential that Areas/locations determine who the regulatory authority is (i.e., Federal, State, or local) and become familiar with the standards that apply to that governing entity. *Enclosure 2, "The Nine Steps to Environmental Compliance" provides step-by-step procedures to assist personnel with identifying regulatory requirements.*[2] Because of the complexity of the environmental regulatory process, location personnel are encouraged to seek out the expertise of safety, health, and environmental management (SHEM) professionals to assist in determining which/how regulations apply.

Without the applicable regulations, it is difficult for a location to confirm their compliance status. For this reason, the Agency, per REE Manual 230.0, requires that each location maintain a complete and current list of *applicable* statues, laws, regulations, standards, policies, etc. These items need to be readily accessible to employees and may be available in either paper, electronic, or other media formats.

"Applicable" refers to those regulations which the location has a regulatory obligation as well as those that the location requires in order to make a determination on whether the regulation applies, regardless if it does or not. For example, under the Emergency Planning and Community Right-to-Know Act (EPCRA), a location that stores hazardous chemicals on the premises needs the EPCRA regulation in order to make a determination on whether the types and quantities of hazardous chemicals they store are in excess of certain thresholds (i.e., if they are in excess, the location must report this information to the local emergency planning committee).

The consequence of non-compliance for Federal facilities has changed over the years. At a minimum, non-compliance detracts from ARS' image as a leader in environmental stewardship. In a worst-case scenario, failure to comply with Federal, State, and/or local regulations can result in notices of violation, fines, and even imprisonment for people who willfully neglect environmental laws.

9. Requesting the Necessary Resources to Successfully Carry Out Our Goals, Objectives, and Targets

Areas/locations should request, through the Annual Resource Management Plan (ARMP) budget process, funding and resources needed to: prevent or correct human health issues; prevent or cleanup environmental releases; correct compliance problems or violations; ensure continued compliance with new regulatory requirements; and, support pollution prevention and other initiatives that will enhance the overall environmental program. Funding requirements should be based in part on:

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[2] Based on a document by George Sundstrom, same title.

- Significant environmental impacts associated with facility and research related operations (i.e., see Section 7, "Aspects and Impacts.")
- Deficiencies noted by employees discovered during day-to-day monitoring activities.
- Trends discovered during internal and external inspections, reviews, and audits.
- Pollution prevention and conservation initiatives.
- Agency-wide emphasis programs.

Hazardous Waste Cleanup (HWC) Funds

The Department has a special appropriation, the HWC fund, for environmental projects associated with pre-remedial, remedial, and removal activities under the Resource Conservation Recovery Act and the Comprehensive Environmental Response, Compensation, and Liabilities Act (i.e., for the investigation and cleanup of contaminated property). To qualify for HWC funding, each requirement must cost $250,000 or more. Guidance regarding the use, request, allocation, release, obligation, and tracking of these funds can be found at REE P&P 230.1, "Tracking of Hazardous Waste Cleanup Funds."

Other Funding Sources

Other direct environmental project requirements (e.g., Clean Water Act, Clean Air Act, Safe Drinking Water Act, Pollution Prevention Act, etc.), as well as indirect costs (e.g., personnel, training, travel, auditing, etc.), are funded with Agency resources. Funding for these environmental requirements should be requested utilizing normal budget channels. In order to receive appropriate consideration during the budget process, funding for *capital improvement projects should include the compliance status in the project narrative. Pollution prevention project narratives should include a summary of the cost payback period and/or the environmental benefits derived* from the project. This will assist management in making a more informed decision about the relative priority of a project.

Funding Priorities

The Agency's priority regarding funding is the same as the priorities established for goals and objectives under Section 6 of this guide.

10. Making Personnel Aware of Their Environmental Roles and Responsibilities, Providing Appropriate Training, and Holding Employees Accountable for Their Performance and Actions, Including Recognizing Them for Outstanding Performance

Organizationally, ARS is set up in three tiers, the Agency or Headquarters level, the Area level, and the location level. *Each level of the organization is required to have an EMS Coordinator who serves as the overall manager. Additionally, each level needs to have a Committee to develop and implement their EMS.*

The EMS Committee should be composed of personnel whom the EMS will impact the greatest. This may include SHEM professionals, collateral duty personnel, facilities managers and engineers, procurement specialists, and administrative officers from varying levels of the organization. The top management official at each level will designate the EMS Coordinator and committee members.

Roles and Responsibilities

The responsibilities of all personnel are clearly stated in REE Manual 230.0, Chapter 10, "Responsibilities." The responsibilities were written so that they increase going up the chain-of-command. Please note that in addition to the personnel roles and responsibilities discussed below, *supervisors at all levels of the organization play a critical role in the environmental program because they are responsible for ensuring that personnel carry out their assigned duties and that they are held accountable for their actions*.

Location level. The Location Senior Management Official, whether the Location Coordinator, Laboratory Director, Center Director, or Research Leader, has overall responsibility for the environmental program. The duties of other location personnel vary from one location to another depending on the complexity of the program and at the discretion of the Location Senior Management Official. Some locations have a full-time Environmental Protection Specialist. Other locations utilize a full-time Location Safety Officer whose duties encompass safety and health as well as environmental management.

Many locations have a Collateral Duty Safety Officer(s) whose duties encompass the safety, health, and environmental management program. It should be noted that "collateral" personnel can be assigned no more than 20 percent of their time accomplishing these "other" duties. Additionally, they are required to have an element in their performance standards clearly stating the scope of their "collateral" duties.

The Location Senior Management Official may also designate personnel to expend smaller percentages of time on the environmental program. For example, many locations have various personnel serving as the hazardous waste coordinator, pesticide manager, emergency response coordinator, etc. Personnel who are assigned less than 20 percent of time can have duties documented through performance standards or through a "Letter of Designation." In either case, the document should clearly state the scope of the employee's responsibilities and provide a percentage of time the employee will expend on these duties.

Regarding EMS committees, OSHA has a similar standard that requires locations with 15 or more employees to have a safety committee. *Locations may choose to have a single*

committee to manage both the safety and environmental programs. If the location chooses this option, the Location Senior Management Official should ensure the committee is large enough that personnel do not expend more than 20 percent on "collateral" duties.

Area level. The Area Director has overall responsibility for the environmental program within the Area. Environmental responsibilities are generally shared between the Area Safety and Health Manager (ASHM) and Cluster Environmental Protection Specialist(s). These are full-time SHEM professionals whose primary responsibility is assisting location personnel with their programs.

Headquarters level. The ARS Administrator has overall responsibility for the environmental program. Administration and Financial Management (AFM), FD, SHEMB, has several full-time SHEM professionals whose primary mission is to coordinate and administer the program for the Administrator. The SHEMB, Chief, serves as the EMS Coordinator at the headquarters level.

Education/Training

In order to have a successful environmental program, personnel must have the necessary knowledge, skills, and abilities to carry out their responsibilities. *At all levels of the organization, supervisors are responsible for ensuring their personnel are properly trained.* E.O. 13148 requires that personnel be trained regarding their environmental responsibilities. At a minimum, employees should be provided the following training:

- *Orientation*. Orientation training provides employees with basic environmental responsibilities as well as site specific training such as occupant emergency plans, workplace hazards, spill response, etc. Each employee should review REE Manual 230.0, Chapter 10, Responsibilities, so that they understand their responsibilities as well as the responsibilities of other personnel that they supervise and/or work with.

- *Safety, Health, and Environmental Management Videos*. ARS has developed a series of videos that provides employees with Agency specific information regarding the SHEM program. Each Area/location received copies of the videos. Personnel are required to view Agency specific SHEM training videos as applicable. The videos and intended audience include:

  - "Safety, Health, and Environmental Management, We All Play a Role" - all employees;
  - "Succeeding as a Collateral Duty Officer (CDSO)" – CDSO's;
  - "SHEM: Employees Rights and Responsibilities" - all employees; and,
  - "Managing Safe Workplaces: Supervisory Roles and Responsibilities" - all supervisors.

Job Specific Training.   Employees also need job specific training that will enable them to do their jobs safely and in compliance with all applicable environmental standards. *Supervisors are responsible for evaluating the duties of their employees and ensuring they receive the appropriate training*. SHEM professionals can assist in this evaluation. They may also be able to conduct the training and/or provide a good source for obtaining it. The Individual Development Plan (IDP) should be used to document the required training employees need as well as the training they receive.

Recognition Program (Awards)

In an effort to further support and promote the environmental program, Areas/locations are encouraged to establish a program that recognizes employees for their environmental contributions. These can be either monetary or non-monetary awards; the significant aspect is to recognize personnel on a recurring basis to increase interest and awareness. Areas/locations are also encouraged to nominate personnel for superior environmental contributions via other Agency awards programs, as well as to gain external recognition offered by outside entities such as the EPA, OSHA, etc.

11. Effectively Communicating With Employees, Partners, Stakeholders, Customers, and the General Public, Our Commitment to the Environment and Soliciting Their Input in Developing and Achieving Our Goals and Objectives

Internal Communication

Within ARS, the lines of communication flow both up and down the chain of command. The Agency encourages personnel to communicate and share information. ARS has a number of established mechanisms to facilitate this informational exchange as discussed below. Additionally, Area offices may have other mechanisms to supplement this list. *Areas/locations are encouraged to utilize and expand these mechanisms to support a viable EMS*.

Safety, Health, and Environmental Libraries. Each Area/location is required to maintain a safety, health, and environmental library accessible to all employees. The library should include all pertinent information regarding the location's program. Examples of documents that should be included in the library are: REE Manual 230.0 and other applicable REE Policies and Procedures; applicable Federal, State, and local regulations; MSDS; EMS documents; Emergency Response Plans; Spill Prevention Control and Countermeasures; training materials; etc.

Bulletin Boards. Each location must post required SHEM related materials (i.e., Poster AD-1010, USDA Safety and Health Poster or equivalent; OSHA Form 300A, Summary of Work-Related Injuries and Illnesses; CA-10, What a Federal Employee Should Do When Injured at Work; as well as any other local requirements) on a bulletin board(s) in a conspicuous location(s). Bulletin boards should be kept organized and updated to maximize usefulness, and they should be easily accessible to a majority of employees.

Location Safety Committee Meetings. OSHA requires that locations with 15 or more employees have a safety committee that meets, at a minimum, quarterly. The purpose of these meetings is to serve as a forum to discuss location safety and health issues. *ARS encourages all locations to establish a safety committee* in order to share responsibilities and to exchange information and ideas. The Location Senior Management Official should review the minutes from the meeting. They should then be either posted or disseminated to all location employees for informational purposes.

Monthly Safety, Health, and Environmental Teleconferences. The Agency sponsors monthly teleconferences to bring together, telephonically, the Agency's SHEM professionals. The purposes of the teleconferences are to disseminate information, solicit the exchange of ideas, enhance participation and involvement, and serve as a means for assessing the overall effectiveness of the Agency's program. Although there are a limited number of phone lines, specialists are encouraged to bridge in other personnel as they see fit.

- *Area Safety and Health Managers' Teleconference*. FD, SHEMB, conducts this teleconference. ASHM's are responsible for disseminating the information presented in this teleconference to necessary personnel within their Areas.

- *Cluster Environmental Protection Specialist's (CEPS) Teleconference*. This teleconference is conducted by CEPS. They are responsible for disseminating the information presented in this teleconference to the necessary personnel within their locations.

Area and National Conferences. Periodically, the Agency will host conferences to bring together personnel to provide uniform safety, health, and environmental education and training.

Reportable Events. REE Manual 230.0 requires that Areas/locations report certain events to the next higher organization level. Personnel should follow the command structure at their respective Area/location to ensure that the highest management official *available* is informed. Additionally, Area offices may have additional requirements. *Instances that should be reported to the next higher organizational level include, but are not limited to*:

- Accidents/incidents in which there is a job-related fatality, the hospitalization of two or more persons, or property damage in excess of $100,000.
- Environmental spills or releases which must be reported to a regulatory authority.
- Any regulatory inspection.

- Any report of deficiency from a regulatory authority (e.g., such as a Notice of Violation).
- News media, special interest groups, and general public inquires.

Electronic Networking. ARS has an extensive electronic network for obtaining environmental information via the Internet. Headquarters, Area, and location organizational levels have websites that are linked to one another and to external agencies such as OSHA, EPA, National Response Center, and Office of the Federal Environmental Executive. The FD, SHEMB, homepage is located at http://www.afm.ars.usda.gov/fd/SHEMB.HTM.

External Communication

Areas/locations are encouraged to involve the public in developing their EMS. This can be accomplished by: holding public meetings and hearings; arranging open house and/or field days; through advisory committees; and via public notices. Other examples of external communication regarding the environmental program include:

EPCRA Reporting. Under the provisions of EPCRA, locations that utilize certain toxic and hazardous materials are required to work closely with the public and local emergency planning committees to provide information they need both to protect the public and to inform the public about toxic and hazardous chemicals and hazardous substances used by and stored at facilities in their communities. EPCRA requires the public be afforded access to all strategies, plans, and reports associated with the release of such substances, pollutants, or contaminants.

News Media. Portions of the general public, special interest groups, and news media are concerned to varying degrees about hazardous substances, hazardous wastes, pesticides, genetic research, ground-water contamination, animal rights, emissions of air toxics, medical wastes, and a host of other environmental issues.

Areas/locations should have written policies and procedures to be followed in the event of contact by someone from the community, an interest group, or the news media. There should be one spokesperson at each level, which, if not the highest management official at that level, has authority to speak for the responsible management official at that level. Contractors should never be allowed to speak on behalf of the Agency. Prior to furnishing the information, the next highest line official should be apprized of the information release as well as the Information Staff.

12. Routinely Monitoring Our Environmental Operations and Conducting Periodic Inspections, Audits, and Reviews to Ascertain That We Meet Applicable Standards and to Evaluate Our Program Effectiveness

E.O. 13148 requires agencies to conduct periodic environmental compliance audits of its locations. Environmental compliance audits are systematic, documented, objective reviews of mission and facility operations to ensure compliance with applicable Federal, State, and local laws, regulations, E.O.'s, and Agency specific policies and procedures. Audits are not meant to replace routine compliance monitoring necessary to ensure compliance with applicable Federal, State, and local regulations. One major benefit of self-auditing is EPA's practice of setting a higher priority on inspecting locations that do not have a self-auditing program.

Management reviews, such as Onsite Assistance Reviews (i.e., see REE Manual 230), Consolidated Assistance, Review and Evaluations (CARE), or EMS Self-Declaration Reviews may be conducted in lieu of environmental compliance audits (i.e., EMS Self-Declaration Reviews are conducted to ensure a location's or Agency's EMS has been properly developed and effectively implemented). Additionally, the annual ARS Inspection/Abatement program can be used to supplement environmental auditing.

Each Area is responsible for determining the type(s) and frequency of audits conducted at their locations. The Area may elect to conduct varying types at a location. Factors that should be considered when determining the type(s) and frequency of audits include the location size, complexity of the mission, and the environmental aspects of its operations. E.O. 13148 recommends that audits be conducted not less than every 3 years.

Each Area will develop and maintain a written 10 year plan outlining the year(s) in which each of its locations will be audited. The plan should include an explanation of the rationale for the type(s) and frequency of audits selected as well as procedures for conducting the audit and for ensuring that deficiencies are promptly corrected. Annually, the Area should review and update the plan and include a list of locations where audits were completed, any schedule changes, and a discussion on the audit findings such as potential trends and efforts to correct such trends. Locations should maintain all documentation related to environmental audits including the questionnaire(s) used, findings, and the corrective actions taken.

13. Correcting Identified Deficiencies in a Timely Manner and Taking Appropriate Steps to Prevent Their Recurrence

It is imperative that identified deficiencies and conditions that violate applicable standards be properly addressed. It is EPA's policy to apply more stringent enforcement actions in instances where a facility has failed to address deficiencies identified during a self-audit. These actions can be considered willful violations of environmental laws and regulations, and hence, the implications can include enforcement actions and civil and criminal sanctions, including substantial fines and/or even imprisonment.

Several categories of deficiencies are discussed below.

- *Lack of policies/procedures/plans/written programs*. These types of deficiencies can often be remedied by drafting appropriate text, obtaining peer and management reviews, and issuing the document at the appropriate level. The underlying cause for not being aware of the requirement needs to be addressed (e.g., is there a system for periodic review of appropriate regulations which require such documents?).

- *Lack of regulatory compliance*. These deficiencies must be corrected by evaluating applicable regulations, listing all regulatory requirements, and ensuring that the requirements are met on an ongoing basis. The underlying cause for being unaware of the requirements needs to be addressed. Regulatory compliance is usually an ongoing effort that requires periodic review. It is usually beneficial to have a central point of contact so that interactions with regulators are handled by specific individuals who can develop a rapport with the regulators over time.

- *Lack of education/training/outreach*. Education, training, and outreach is critical to the success of an EMS because a well-defined structure of responsibility and duties can only be implemented if the affected personnel are properly trained. This deficiency can be corrected by implementing a training program. The training can be an on-line presentation, classroom training, video, or individual instruction, to name a few methods. In any case, the training must be documented to include the trainee's name, date of training, course content, and certification that the course was completed (e.g., such as the employee's signature).

    Often, training courses on a given topic have already been created by someone in ARS, and can be shared. The training program must be designed to ensure that new employees receive introductory training, and that refresher training is periodically provided.

14. Clearly Documenting and Reporting the Progress and Achievements Related to This Policy

One of the key elements of an EMS is continual improvement. In order to show improvement, the baseline condition must be documented, as well as the improved condition. Therefore, documentation and reporting are critical to demonstrating environmental management progress and success (i.e., if it isn't documented, it didn't happen).

Types of Documentation

Because of the potentially sensitive nature and liability issues regarding the environmental management program, there is a wealth of documentation that needs to be

maintained. In general, the types of documentation that should be maintained include, but are not limited to:

- written EMS policy;
- annual goals, objectives, and targets;
- baseline surveys and monitoring logs;
- correspondence with regulatory agencies;
- inspection, audit, and review supporting materials and reports;
- records of deficiency and corrective actions;
- cost data (equipment costs, pre- and post-improvement operating costs);
- training materials and records; and,
- other EMS documentation and reports.

Records Retention

Records should be maintained in a central location by personnel who can access and disseminate the information as needed. As a general rule of thumb, both the author and recipient of a document should retain copies to ensure the data is available. Areas/locations that prefer to avoid duplicate documentation should discuss and draft procedures so it is clear who/where documentation will be retained. Environmental documentation and records should be maintained for a minimum of 30 years. At this time, records should be reevaluated to determine if they should be retained.

Annual EMS Report

Annually, each Area/location will report on the EMS activities and efforts that have taken place during the past calendar year. This report is required by the EPA and the information they request changes from year to year. Within ARS, Areas will collect information from their locations and *consolidate* the information into an Area-wide report. This report should reflect the Area's overall EMS initiatives for the previous year and explain how their locations contributed to the Area's program.

Likewise, SHEMB will consolidate the Area reports into the overall Agency report. This report is then sent to the Department who in-turn provides it to the EPA. This report becomes a public record of the Agency's initiatives under this program.

Enclosure 1: List of Potential Location Research Program and Facility Activities, Aspects and Their Impacts on the Environment

Summary of Activities Addressed in this Enclosure:

- Laboratory Research Utilizing Hazardous Chemicals
- Laboratory Research Utilizing Radioactive Materials
- Laboratory Research Utilizing Biological Materials
- Research and Facility Maintenance Involving Use of Agricultural Pesticides
- Research Involving Use of Farm Animals
- Research Involving Use of Aquatic Animals
- Facility Construction Projects (New)
- Facility Construction Projects (Renovation)
- Use of Computer and Electronic Equipment
- Grounds Maintenance, Lawn and Ornamental Care
- Production and Maintenance of Drinking Water Supply
- Use of Water for Research Purposes (Aquatic Research, Irrigation)
- Temperature Control Inside Location Buildings
- Government Vehicle and Motorized Equipment Usage
- Wastewater Discharge from Location Activities
- Facility Maintenance Operations

Activity: Laboratory Research Utilizing Hazardous Chemicals

Aspect	Impacts
Purchasing Hazardous Chemicals	Depletion of natural resources in the following ways: (a) Energy utilized in chemical manufacturing; and, (b) Energy requirements for chemical storage (e.g., use of electricity for low-temperature refrigeration or ventilation). Generation of hazardous waste by the following activities: (a) Duplicate purchasing of hazardous chemicals already on location inventory; (b) Large-scale purchasing of unusable quantities of chemical; and, (c) Chemical is not used, resulting in chemical entering hazardous waste stream due to expired use date.
Use of Hazardous Chemicals	Contamination of land, water, and air. Depletion of natural resources in the following ways: (a) Energy utilized in laboratory manipulations (e.g., use of electricity for electrophoresis, centrifugation, fumehood operation, etc.); (b) Use of water, plastic ware, and paper; and, (c) Increased chemical consumption due to use of macro chemical methodologies rather than employing use of newer microchemistry techniques. Contamination of land, water, and air. Generation of hazardous wastes and the cost for disposal. Chemical release or spills and the cost for HAZMAT or emergency spill response team clean-up and disposal.

Activity: Laboratory Research Utilizing Radioactive Materials

Aspect	Impacts

Use of Radioactive Materials and X-ray Emanating Equipment	Depletion of natural resources.
	
	Generation of radioactive, mixed, or hazardous wastes from the following sources:
	
	    (a) generation of radiographic film waste; and,
	    (b) radioisotope waste that is not permitted for decay in storage (half-life exceeds 90 days).
	
	High cost for "mixed waste" (radioactive and hazardous waste mixtures) disposal.
	
	Contamination of facilities, land, water, and air.
	
	Radioactive material releases or spills.

Activity: Laboratory Research Utilizing Biological Agents

Aspect	Impacts
Production of Biological or Medical Waste	Release or spill resulting in contamination of animals, plants, land, water, and air. Depletion of natural resources (decontamination chemicals, energy required for incineration or offsite shipment).

Activity: Research and Facility Maintenance Involving the Use of Agricultural Pesticides

Aspect	Impacts
Application of Agricultural Pesticides	Pesticide rinsate generation (container and spray equipment cleaning) and spills.
	Contamination of surrounding land, surface or ground water, and air (pesticide drift).
	Pesticide toxicity to wildlife.
	Generation of hazardous and universal waste (unused pesticide products) and cost to facility for waste disposal.

Activity: Research Involving the Use of Farm Animals

Aspect	Impacts
Feed Production for Farm Animals	Depletion of natural resources (fuel, fertilizer, and pesticide consumption).
	Use of chemicals associated with veterinary care (pesticide and antibiotic use).
Generation of Farm Animal Waste	Odor from animal wastes.
	Depletion of natural resources (fuel for waste removal).
	Nutrient enrichment and contamination of surrounding waterways and watersheds.

Activity: Research Involving the Use of Aquatic Animals

Aspect	Impacts
Production of Aquatic Animals	Nutrient enrichment of downstream waterways (animal waste).
	Depletion of groundwater (water use).
	Depletion of natural resources (oxygen enrichment, operation of water pumping and circulation systems, tank cleaning products).

Activity: Facility Construction Projects (New)

Aspect	Impacts
Construction of New Facilities	Depletion of natural resources (construction materials, fossil fuels).
	Land and waterway contamination (run-off from construction sites).

Activity: Facility Construction Projects (Renovation)

Aspect	Impacts
Renovation of Existing Facilities	Generation of hazardous waste (PCB containing materials, asbestos containing materials, mercury containing materials).
	Generation of solid waste.
	Depletion of natural resources.

Activity: Use of Computer and Electronic Equipment

Aspect	Impacts
Purchase, Operation, and Disposal of Electronic Equipment	Depletion of natural resources. Generation of recyclable waste (electronics waste, lead acid batteries, toner cartridges, paper).

Activity: Grounds Maintenance, Lawn and Ornamental Care

Aspect	Impacts
Mowing and Planting	Depletion of natural resources (pesticide, fertilizer, and water use). Depletion of natural resources (fossil fuels for equipment operation).

Activity: Production and Maintenance of Drinking Water Supply

Aspect	Impacts
Pumping, Treatment, and Storage of Water	Depletion of natural resources (ground or surface water). Depletion of natural resources (fossil fuels, treatment chemicals).

Activity: Use of Water for Research Purposes (Aquatic Research, Irrigation)

Aspect	Impacts
Production and High Volume Usage of Water for Research Purposes	Depletion of natural resources (surface or groundwater usage requirement).
	Depletion of natural resources (use of fossil fuel for pumping).
	Contamination of land and water (nutrient run-off).

Activity: Temperature Control Inside Location Buildings

Aspect	Impacts
Storage and Burning of Fossil Fuels for Facility Heating	Depletion of natural resources (fossil fuel).
	Air emissions.
	Storage tank management.
	Ground or surface water contamination.
Operation and Maintenance of Air Conditioning Systems	Ozone depletion (release of refrigerant containing ozone depleting substances).
	Depletion of natural resources (fossil fuel).

Activity: Government Vehicle and Motorized Equipment Usage

Aspect	Impact
Motor Vehicle Activities	Generation of used oil, oil contaminated rags, used antifreeze, tires, batteries.
	Generation of hazardous waste (parts cleaners, solvent degreasers).
	Contamination of land and waterways (fuel storage, fuel transfer operations, vehicle washing operations).
	Air emissions.
	Depletion of natural resources (fossil fuel, lubricants, tires).

Activity: Wastewater Discharges from Location Activities

Aspect	Impact
Laboratory Sink and Building Floor Drain Discharge into the Sanitary Sewer	Potential impacts at treatment plant.

Activity: Facility Maintenance Operations

Aspect	Impact
Generation of Waste from Facility Maintenance Activities	Generation of hazardous waste (spent fluorescent lamps, PCB containing lamp ballasts, spent solvents, paints).
	Generation of asbestos-containing waste.
	Generation of universal waste (used oils, mercury-containing equipment).
	Ozone depletion (repair or excessing of older refrigeration equipment containing ozone depleting refrigerants).
	Generation of solid waste (excess furniture and equipment).

Enclosure 2: The Nine Steps to Environmental Compliance

1. **Find out what you do and have.** This includes:

    - *Looking around the property* for obvious potentially hazardous conditions or regulated units, such as underground storage tanks, hazardous waste generation, oil spills, incinerators, fumehoods, archaeological sites, wetlands, etc.

    - *Identifying existing and planned buildings* including support facilities (e.g., a historical building, a planned Biolevel 4 laboratory, paint shop, welding shop, electrical substation, pesticide washdown area, dishwashing).

    - *Identifying the operations* carried out or planned (e.g., Biolevel 4 research, pesticide application, etc.).

2. **Find out what you do or have that is or may be regulated**. This could include, but is not limited to:

    - Construction projects
    - Research projects
    - Sewage disposal
    - Solid waste disposal (e.g., landfills)
    - Surface impoundments
    - Septic tanks/injection wells
    - Hazardous waste
    - Infectious/medical waste
    - Radiological mixed waste
    - Waste oil
    - Underground storage tanks
    - Above ground storage tanks
    - Air pollutant emissions
    - Incinerators
    - Fuel burning equipment
    - Irrigation water withdrawals
    - Drinking water supply
    - Wastewater discharges
    - Stormwater discharges
    - Hazardous substances
    - Asbestos use or removal
    - Polychorinated biphenyls
    - Pesticide use
    - Land use
    - Historical/archaeological sites
    - Spills and other releases
    - Wetlands
    - Endangered species/critical habitat

3. **Find out what and whose rules may or do apply.** These may include:

- Federal (USDA, EPA, Fish and Wildlife Service, Army Corp of Engineers, DOT, FAA, GSA, DOE, OMB, etc.)
- State
- Local (County)
- Regional or intrastate
- International

4. **Find out the what, when, and how of a regulatory/compliance requirement.** Review the regulations and compare them to the actual facility/operation to determine:

- if a permit is required;
- if records/periodic reports are required;
- if an external review or approval is required before an operation is put on line;
- if public hearings are required;
- what procedures have to be followed; and,
- when actions (i.e., reporting, recording, reviewing, etc.) are required to happen.

5. **Define who will be responsible for doing what, when and how.** This step includes:

- Assigning responsibilities.
- Developing a detailed plan of action with milestones, statement of work, cost estimate, etc.
- Giving/getting authority, approvals, any needed permits, and funding for the needed project.
- Identifying/committing required resources in the applicable timeframes.

6. **Do it!!** This includes executing the plan of action and other items in Step 5.

7. **Check for rule changes now and again.** This step is critical because:

- something previously unregulated may come under regulation; and,
- requirements may change.

8. **Keep doing it!** There is no such thing as "laurels" when it comes to environmental compliance. Credibility, however, is a useful, gainable item.

9. **Document the other 8 steps.** Being able to demonstrate that environmental requirements were identified and met is often just as important as actually meeting them.