



Implementation Guide For The Code of Environmental Management Principles for Federal Agencies (CEMP)



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IMPLEMENTATION GUIDE FOR THE CODE OF ENVIRONMENTAL MANAGEMENT PRINCIPLES FOR FEDERAL AGENCIES (CEMP)

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CHAPTER 1: INTRODUCTION

What is the Code of Environmental Management Principles (CEMP)?

The Code of Environmental Management Principles for Federal Agencies (CEMP), developed by the Environmental Protection Agency (EPA) in response Executive Order 12856, is a collection of five broad principles and underlying performance objectives that provide a basis for Federal agencies to move toward responsible environmental management. Adherence to the five principles will help ensure environmental performance that is proactive, flexible, cost-effective, integrated, and sustainable.

CEMP focuses federal agencies on the necessity of state-of-the-art environmental management for reaching the highest levels of environmental performance. State-of-the-art should be defined as those environmental management programs or systems that ensure environmental performance be considered as world-class or best-in-class by peers and stakeholders. EPA has patterned the CEMP on the common critical elements of a comprehensive management system tailored to the environmental activities of an organization (an Environmental Management System).

Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements," which was signed on August 3, 1993, requires EPA to "establish a 'Federal Government Environmental Challenge Program'," one component of which is to "challenge Federal agencies...to agree to a code of environmental principles to be developed by EPA, in cooperation with other agencies, that emphasizes pollution prevention, sustainable development and state-of-the-art environmental management programs..." EPA has been working to develop the CEMP through the Interagency Pollution Prevention Task Force, which was created by the Executive Order, early in calendar year 1995. Sixteen Federal agencies participated in the development of the CEMP.

THE PRINCIPLES

1. MANAGEMENT COMMITMENT:

The agency makes a written top-management commitment to improved environmental performance by establishing policies which emphasize pollution prevention and the need to ensure compliance with environmental requirements.

2. COMPLIANCE ASSURANCE AND POLLUTION PREVENTION:

The agency implements proactive programs that aggressively identify and address potential compliance problem areas and utilize pollution prevention approaches to correct deficiencies and improve environmental performance.

3. ENABLING SYSTEMS:

The agency develops and implements the necessary measures to enable personnel to perform their functions consistent with regulatory requirements, agency environmental policies, and its overall mission.

4. PERFORMANCE AND ACCOUNTABILITY:

The agency develops measures to address employee environmental performance, and ensure full accountability of environmental functions.

5. MEASUREMENT AND IMPROVEMENT:

The agency develops and implements a program to assess progress toward meeting its environmental goals and uses the results to improve environmental performance.

The CEMP is not a regulation, it is a voluntary component of a program established to encourage federal agencies to enhance their environmental performance through the creative use of management tools. As such, the goal is to move agencies "beyond compliance" and the traditional short-term focus on regulatory requirements to a broader, more inclusive view of the interrelated nature of their environmental activities.

Unfortunately, federal agencies often lack the resources to develop a complete environmental management program, especially when their primary missions are not directly related to environmental protection or management. They are often forced to take a "finger in the dike" approach that focuses on compliance, addressing situations as they occur, instead of planning their activities to prevent such situations. They may even be successful, until they run out of fingers. Thus, short-term success is no indicator of the long-term stability of the system and may even lead to complacency. Agencies that are able to better understand their "dike" (how it was built, why it was built the way it was, and how the demands on it are changing over time) will be in a better position to identify weak points and predict the next "high tide," managing their resources for prevention, not just response. Of course, regulatory compliance is still required, but the CEMP, properly implemented, will provide agencies with a tool to improve overall performance while maintaining compliance as a performance baseline.

What is an Environmental Management System (EMS)?

The International Organization for Standardization (ISO) defines environmental management systems as "that part of the overall management system which includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy." In other words, an EMS focuses on environmental management practices, rather than the activities themselves, such as air monitoring or drum handling. The EMS provides the structure by which the specific activities can be carried out efficiently and in a manner consistent with key organizational goals, but does not specify levels of performance (e.g., the EMS will ensure that proper procedures are in place and that operator training exists but won't specify methods or frequency of sampling). The EMS allows an organization the flexibility to adapt the system to its needs and priorities, rather than forcing a "one size fits all" mentality.

The EMS approach has its genesis in the same movement that created the "quality management" systems traditionally applied to manufacturing, such as Total Quality Management (TQM). The Global Environmental Management Initiative (GEMI) patterned its Total Quality Environmental Management (TQEM) philosophy on TQM, employing many of the same diagnostic tools for environmental applications. The more general EMS approach incorporates the "plan-do-check-act" cycle and the emphasis on continuous improvement

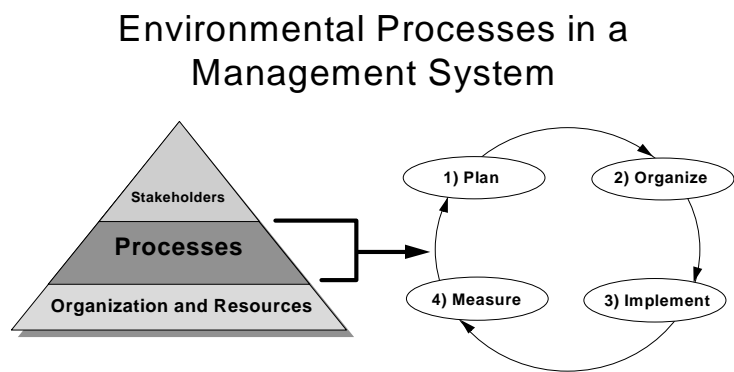


Figure 1

found in TQM and other quality management schemes. [See Figure 1] A number of organizations and countries (e.g., ISO, Britain, Canada) have developed standards to encourage implementation of the EMS approach.

Is the CEMP an EMS Standard?

The CEMP is a set of principles - not a standard - that will help an organization improve its environmental performance and level of environmental protection. In developing the CEMP, EPA examined a number of EMS standards to identify common elements and areas that needed to be addressed. The CEMP reflects its EMS origins in its structure and format; however, it is not a standard. A technical standard for a product describes characteristics related to its performance, such as size, strength, durability, and materials of construction. Similarly, a technical management standard describes the characteristics desirable for a management approach to a particular subject area, such as quality or the environment. Just as conforming to a technical product standard allows a manufacturer to advertise that its product meets agreed-upon specifications for performance, an organization conforming to a technical management specification standard (such as ISO 14001) can claim that its management practices are aligned with consensus "best practices." In addition to the possibility of improving performance through improved management, one of the primary motivations for adopting such standards is the potential for commercial advantage resulting from independent certification of conformance to the standard (and potential for disadvantage from failure to conform).

Rather than focus on strict evaluations of conformance, EPA would like to emphasize the aspects of improved management (leading to improved performance) and continuous improvement. In addition to a statement of expectation for each broad principle, the CEMP stresses the important indicators supporting each principle (the "Performance Objectives"), so that agencies can understand their intrinsic and systemic value and better judge agency progress. This Guide expands upon that informative discussion. The CEMP also differs from most EMS standards in its emphasis on regulatory compliance and the fact that it is targeted toward Federal agencies (essentially removing the appeal of commercial advantage). For these reasons, EPA believes that it would be inappropriate for it to "endorse" a particular EMS standard at this time,

BASIC EMS ELEMENTS

1. Environmental Policy
2. Planning
3. Implementation and Operation
4. Checking and Corrective Action
5. Management Review

Although these terms refer specifically to the ISO 14001 EMS Standard, they are common elements of other EMS Standards and reflected in the CEMP.

CEMP BACKGROUND SOURCES

1. ISO 14001 EMS Standard (draft)
2. NSF-110 EMS Standard (draft)
3. CMA Responsible Care Program
4. CSA-2750 EMS Standard (draft)
5. DOE Environmental Management Assessment Protocols
6. U.S. Sentencing Commission Guidelines
7. Canadian Code of Environmental Stewardship
8. EPA Environmental Leadership Program (proposed)
9. GEMI TQEM materials
10. Wever, "Utilizing a Self Assessment Matrix for Implementing TQEM"

although EPA has participated strongly in the ISO process and exchanges information with other countries that have developed such standards.

On September 3, 1996, Steve Herman, the EPA Assistant Administrator for Enforcement and Compliance Assurance, signed a letter transmitting the CEMP to the Federal agency executives who had signed the Charter for the Interagency Pollution Prevention Task Force in September 1995, requesting written commitment to the Principles contained in the CEMP. In this letter, EPA also asked each agency to provide a written statement declaring their support for the CEMP principles at the agency level along with a description of their plans for implementation of the CEMP at the facility level. The CEMP was published in a *Federal Register* notice on October 16, 1996 (61 *FR* 54063). The information in this document is provided as a guide to assist agencies in formulating their responses to EPA and their approaches to implementation of the CEMP.

Although this document presents specific actions that could be taken in implementing the principles, they are offered only as suggested steps that have proven useful to other organizations in implementing similar programs. Agencies are encouraged to consider other steps that might be more appropriate for their circumstances, or to adopt an EMS standard as the vehicle for implementing the CEMP. An agency that implements an EMS (such as ISO 14001) will have addressed the major elements of the CEMP, so long as its system includes an explicit compliance assurance component.

The term "agency" is used throughout the CEMP to represent the participation of individual federal government bodies. Many Cabinet-level "agencies" have multiple levels of organization and contain independently operating bodies (known variously as bureaus, departments, administrations, services, major commands, etc.) with distinct mission and function responsibilities. Therefore, while it is expected that a "parent agency" would subscribe to the CEMP, each parent agency will have to determine the most appropriate level(s) of explicit CEMP implementation for its situation. Regardless of the level of implementation chosen for the organization, it is important that the parent agency or department demonstrate a commitment to these principles.

PLUGGING THE GAPS

A gap analysis is designed to answer the following questions:

- ! How well are the organization and its environmental programs performing?
- ! What standards of environmental performance does the organization hope to achieve?
- ! What are the gaps between objectives and performance?
- ! What existing programs and activities can serve as the best foundation for improved environmental performance?

Before an agency can fully implement the CEMP, it should conduct an initial review or "gap analysis" to evaluate its current program and specific needs. Although the gap analysis is very important, it can be counter-productive for an agency to focus narrowly on what it is not doing. It is also important to understand what it is already doing, and evaluate ways to improve and build on existing programs and activities. Some agencies may find that they are already performing many of the suggested activities. This is good; there is no need to rebuild a program from scratch. In fact, EPA believes that many agencies do have programs that address the principles of the CEMP, but those programs may not be seen as connected parts of a system and may be operated in isolation or by multiple contractors. Looking outside the environmental

arena can provide inspiration. Agencies may be tempted to say "Yes, we do that, but it's not environmental, it's part of our quality (or some other) system." If it already helps manage important agency activities, it can probably help environmental management as well. The full impact of the CEMP/EMS approach will be realized in tying these programs and activities together to improve efficiency, which is also likely to improve performance and cost-effectiveness.

Building on existing programs becomes even more important when agencies are faced with diminishing resources and being asked to "do more with less." Through careful analysis, agencies will probably find ways to address the principles at little or no cost. For example, developing a policy statement on environmental protection does not require large investments in personnel or equipment, yet it can carry agency-wide visibility and impact. Ultimately, agencies that are able to invest in the implementation of the principles are likely to realize a high return on that investment through an improved "risk profile" at their facilities, resulting in a lowering of costs associated with regulatory compliance, health and safety, incident response, and cleanup of contaminated sites. Non-monetary benefits, such as improved public opinion and employee satisfaction, can also be achieved.

How Does the CEMP Tie Into Other EPA Programs?

EPA has several programs that are designed to encourage creative approaches to environmental protection. Most notable among these are Project XL and the Environmental Leadership Program (ELP), both of which encourage Federal agency participation (McClellan AFB in Sacramento and Puget Sound Naval Shipyard in Bremerton, Washington participated in the pilot phase of the ELP). The ELP has established the full-scale implementation of an EMS as one of its criteria for participation, and evaluated the CEMP and ISO 14001 as background material in developing this criterion. Project XL also has the use of innovative regulatory management programs as a required element. One major difference between the two programs is that the ELP seeks to identify more efficient operations *within* the existing regulatory structure, while Project XL will allow some relief from regulatory requirements *if* the ultimate performance exceeds that achievable with full compliance.

WHY DOES THE CEMP EMPHASIZE COMPLIANCE?

A basic EMS describes the managerial framework within which environmental activities are carried out, rather than the activities themselves. The philosophy behind the EMS approach is that the way in which a site is managed (rather than a strict focus on outcomes) does make a difference. Most existing environmental regulations do not address this management implementation aspect.

While EPA agrees with this approach, it does not wish to lose sight of the fact that compliance with regulations is of paramount importance, as well as a primary mission of the Agency. Implementation of regulatory requirements has driven most of the improved environmental performance over the past quarter-century, and the regulatory structure continues to ensure the basic level of protection for workers, the public, and the environment. A properly implemented EMS can provide more consistent levels of compliance and higher levels of environmental performance, depending upon the objectives and targets selected. Organizations should not take the view that a few regulatory lapses are of secondary importance to implementing the EMS. Indeed, low or inconsistent levels of compliance can be indicative that the EMS is not working. EPA approves of EMS implementation as a means to identify weaknesses in an organization's approach to compliance and to examine its internal

**MANUAL ELEMENTS REQUIRED FOR A
COMPLIANCE-FOCUSED ENVIRONMENTAL MANAGEMENT SYSTEM
IN A SETTLEMENT AGREEMENT**

1. Management Policies and Procedures
 - a. Organization's Environmental Policy - Must clearly communicate management commitment to environmental performance, including compliance with applicable federal, state, and local environmental statutes and regulations, including permits (i.e., "environmental requirements").
 - b. Site-specific Environmental Policies and Standards
 - ! Body of general policies, rules, and procedures for environmental principles and practices.
 - ! Includes process for developing, approving, and communicating standard operating practices for activities having potentially adverse environmental or regulatory compliance impacts.
 - ! Clearly identifies organizational responsibilities for maintaining regulatory compliance, including required reporting to regulatory agencies.
 - ! Includes ongoing means of communicating environmental issues and information to all organization personnel, on-site service providers, and contractors, and receiving and addressing their concerns.
 - ! Describes and establishes processes to ensure sustained interaction with regulatory agencies, and within the organization (e.g., between the various divisions, contractors, and the Environmental Control Department) regarding environmental issues and regulatory compliance.
2. Organization, Personnel, and Oversight of EMS
 - a. Describes, organizationally, how the EMS is implemented and maintained.
 - b. Includes organization charts that identify units and individuals having environmental performance and regulatory compliance responsibilities.
 - c. Identifies duties, responsibilities, and authorities of key environmental program personnel in implementing and sustaining the EMS (e.g., could include position descriptions and performance standards for all environmental department personnel, and excerpts from others having specific environmental program and regulatory compliance responsibilities).
3. Accountability and Responsibility
 - a. Specifies accountability and responsibilities of organization's management, on-site service providers, and contractors for environmental protection practices, compliance, required reporting to regulatory agencies, and corrective actions implemented in their area(s) of responsibility. Also specifies potential consequences of departure from specified operating procedures, including responsibilities (personal and organizational) for civil/administrative penalties imposed as a result of noncompliance.

In addition, EPA's National Enforcement Investigation Center (NEIC) has begun to require EMS elements in consent decrees with several private companies. This approach is intended to ensure that companies with prior instances of non-compliance address the root causes of those situations. [See Related Boxes]

What You Will Find in This Document

Chapter 2 summarizes federal agency responses to the CEMP, as received by EPA. Each of Chapters 3-7 is dedicated to one of the principles. The principle and its supporting *Performance Objectives*, which provide more information on the tools and mechanisms by which the principle is fulfilled, are described in detail and several possible actions that can help an agency meet the principle are provided. These actions are provided as guidelines to assist agencies in understanding the scope of the principles, and as a suggested basis for planning. Agencies are not required to pursue all of these actions, nor are they limited to them. It should be understood that, as is implicit in the EMS approach, implementation of the principles will not be as effective if they are administered as though they are discrete pieces of a larger

EMS MANUAL ELEMENTS (cont.)

4. Environmental Requirements
 - a. Describes process for identifying, understanding, and communicating environmental requirements to affected organization personnel, on-site service providers, and contractors, and ensuring that facility activities conform to those requirements. Specifies procedures for identifying and obtaining information about changes and proposed changes in environmental requirements, and incorporating those changes into the EMS.
5. Assessment, Prevention, and Control
 - a. Identifies an ongoing process for assessing operations, for the purposes of preventing and controlling releases, environmental protection, and maintaining compliance with statutory and regulatory requirements. This shall include monitoring and measurements, as appropriate, to ensure sustained compliance. It shall also include identifying operations and waste streams where equipment malfunctions and deterioration, operator errors, and discharges or emissions may be causing, or may lead to, releases of hazardous waste or hazardous constituents to the environment, or a threat to human health or the environment. Finally, process shall include performing root cause analysis of identified problems to prevent recurring issues.
 - b. Describes process for identifying activities that could cause adverse environmental impacts and/or regulatory noncompliance, and where documented standard operating practices need to be developed [see element 1.(b)].
 - c. Describes a system for conducting and documenting routine, objective, self-inspections by department supervision and trained staff, especially at locations identified by the process described in (a) above.
 - d. Describes process for ensuring input of environmental concerns and requirements in planning; design; and operation of ongoing; new; and/or changing buildings, processes, maintenance activities, and products.
6. Environmental Incident and Noncompliance Investigations
 - a. Describes standard procedures and requirements for incident and noncompliance reporting, investigation; and development, tracking, and effectiveness verification of corrective and preventive actions. The procedures shall specify testing of such procedures, where practicable.

program. In fact, they are so tightly interconnected that the entire program can succeed only if the elements are fully integrated. Although clear managerial responsibility must be assigned for each component, the system as a whole depends ultimately on communication among the various program elements.

Similarly, activities described in the context of one of the principles are often carried throughout other

EMS MANUAL ELEMENTS (cont.)

7. Environmental Training, Awareness, and Competence
 - a. Identifies specific education and training required for organization personnel, as well as process for documenting training provided.
 - b. Describes program to ensure that organization employees are aware of its environmental policies and procedures, environmental requirements, and their roles and responsibilities within the environmental management system.
 - c. Describes program for ensuring that personnel responsible for meeting and sustaining compliance with environmental requirements are competent on the basis of appropriate education, training, and/or experience.
8. Planning for Environmental Matters
 - a. Describes how environmental planning will be integrated into other plans developed by organizational subunits, as appropriate (e.g., capital improvements, training, maintenance).
 - b. Requires establishing written goals, objectives, and action plans by at least each operating organizational subunit, as appropriate, including those for contractor operations conducted at the facility, and how specified actions will be tracked and progress reported.
9. Maintenance of Records and Documentation
 - a. Identifies the types of records developed in support of the EMS (including audits and reviews), who maintains them and where, and protocols for responding to inquiries and requests for release of information. Specifies the data management systems for any internal waste tracking, environmental data, and hazardous waste determinations.
10. Pollution Prevention Program
 - a. Describes an internal program for reducing, recycling, reusing, and minimizing waste and emissions, including procedures to encourage material substitutions. Also includes mechanisms for identifying candidate materials to be addressed by program and tracking progress.
11. Continuing Program Evaluation
 - a. Describes program for periodic, at least annually, evaluation of the EMS, including incorporating the results of the assessment into program improvements, revisions to the manual, and communicating findings and action plans to affected employees, on-site service providers, and contractors.
12. Public Involvement/Community Outreach
 - a. Describes a program for ongoing community education and involvement in the environmental aspects of the organization's operations and general environmental awareness.

principles. For example, benchmarking should be done not only in connection with daily operations, but also in terms of information management, pollution prevention initiatives, safety and emergency response, training, and so on. Audits will target not only what is commonly thought of as

"environmental compliance," but also safety, emergency response, and documentation procedures. Training and information management are integral to the successful operation of any organization.

The last chapter in this document contains a "Self-Assessment Matrix," which describes stages that an organization may go through in implementing the principles. The Matrix shows five levels for each of the Performance Objectives that support the principles, with a brief description of a typical organization's accomplishments at that level. Agencies can use the Matrix and the accompanying text in the chapter to relate the suggested activities to the levels in the Matrix. There is no real significance to the numbering of the levels. No scoring system is implied, although agencies are free to track their own progress in such a manner, if they so desire. Agencies are also free to modify the Matrix to make it a more useful tool.

EPA does not expect the CEMP to be implemented "overnight." EPA fully realizes that some agencies, bureaus, and departments may require years to implement the CEMP. Awareness and understanding are the necessary first steps. The CEMP, like EMS standards, includes ongoing review and a commitment to continuous improvement, so in one sense implementation will never be "finished."

EPA's Federal Facilities Enforcement Office (FFEO) is available to provide technical assistance to agencies implementing the CEMP. EPA is also collaborating with the Department of Energy in preparing a primer on environmental management systems for federal facilities. The *Primer* addresses specific aspects of environmental management (e.g., pollution prevention and audits) and discusses ways to integrate and make them more powerful within the context of an EMS. FFEO is leading EPA's efforts on the *Primer*.

CHAPTER 2: FEDERAL AGENCY RESPONSES TO THE CEMP

CEMP Development Process

On August 3, 1993, President Clinton signed Executive Order No. 12856, which pledges the federal government to implement pollution prevention measures, and publicly report and reduce the generation of toxic and hazardous chemicals and associated emissions. Section 4-405 of Executive Order 12856 requires the Administrator of the Environmental Protection Agency (EPA), in cooperation with federal agencies, to establish a Federal Government Environmental Challenge Program. As required under the Executive Order, the Challenge program consists of three components to challenge Federal agencies to: 1) agree to a code of environmental principles emphasizing pollution prevention, sustainable development, and "state of the art" environmental management programs; 2) submit applications to EPA for individual Federal facilities for recognition as "Model Installations"; and 3) encourage individual Federal employees to demonstrate outstanding leadership in pollution prevention.

On September 12, 1995, senior agency representatives signed the Charter for the Interagency Pollution Prevention Task Force committing the federal government to achieve, among other items, environmental excellence through various activities including: a) active agency and facility participation in the Federal Government Environmental Challenge Program and, b) participation in the establishment of an agency Code of Environmental Management Principles (CEMP). In June 1995, a subcommittee of federal agency representatives was formed by the Task Force to work directly with EPA in the development of the CEMP. Through this process, several drafts of the CEMP were forwarded to federal agencies by the subcommittee for formal review and comment. The version of the CEMP published on October 16, 1996 (61 *FR* 54062) represents the final version as approved by the subcommittee and incorporates comments from members of the Interagency Task Force.

As stated in Chapter 1, EPA formally transmitted the CEMP to the federal agency executives who had signed the Charter for the Interagency Executive Order 12856 Pollution Prevention Task Force on September 3, 1996. In the letter accompanying the CEMP, Steve Herman, the EPA Assistant Administrator for Enforcement and Compliance Assurance, requested written agency commitment to the Principles contained in the CEMP and a description of their plans for implementation of the CEMP at the facility level. EPA sought endorsement of the CEMP Principles on an agency wide basis, with flexibility as to how the Principles themselves are implemented at the facility level. For example, agencies could choose to directly implement the CEMP Principles at the facility level or use another alternative environmental management system (e.g., ISO 14001). This flexible approach was in recognition that of the fact that individual federal facilities and installations may already have environmental management systems in place or are considering adoption of the ISO 14001 Environmental Management Standard.

Responses From Federal Agencies and Departments

As previously stated, in September 1996 EPA requested federal agencies to provide a brief written statement declaring the agency's support for the CEMP Principles along with a concise explanation of how the agency plans to implement the CEMP at the facility level. Responses endorsing the CEMP on an agency-wide basis have been received from the 16 agencies that participated in the development of

the CEMP. A table summarizing the responses is provided in Table 1 and the copies of each agency response are contained in Appendix 1.

Three of the responses were detailed in nature. The Postal Service, the Department of Defense (DoD), and the Central Intelligence Agency (CIA) addressed each of the five CEMP principles as well as the objectives of the principles, explained how the agency planned to implement the CEMP at the facility level, and described how the agency's management system will meet the CEMP.

The Postal Service's head of Environmental Management Policy endorsed the CEMP, described its management commitment, submitted a copy of its Policy for Environmental Protection which contains seven guiding principles, and stated that the Postal Service is also evaluating the use of ISO 14001 as a management system to meet the CEMP. The Postal Service described its compliance program, discussed its Environmental Strategic Plan, and submitted its most recent annual status report which tracks the status of the current 105 Tactical Action Plans intended to achieve compliance and leadership. The Postal Service described its enabling systems and submitted a copy of its environmental target areas (e.g., leadership targets and compliance targets) which provide focus and direction for developing and implementing plans at the Area, District and Plant Levels. The Postal Service described its performance and accountability program, and how it continuously monitors progress and updates the Tactical Actions in its Environmental Strategic Plan to reflect many new ideas, target areas and programs. Since Postal Service employees are accountable for environmental objectives through the Policy for Environmental Protection, the Policy was integrated into personnel evaluations to reinforce personnel accountability. The Postal Service also discussed its measurement and improvement strategy, and its utilization of a concept known as Environment Information Services and Support to gather, analyze and distribute data and information through the Postal Routed Network to Postal environmental professionals and personnel throughout the U.S.

DoD endorsed the CEMP at the Deputy Under Secretary level, and provided the only response which addressed all of the objectives of each CEMP principle. DoD discussed its management commitment, and described its Environmental Security Directive which establishes environmental protection goals and develops supporting strategies that fully complement accomplishment of DoD's overall mission. DoD also stated that the Department is using ISO 14001 in the development of its current strategic plan and is evaluating adoption of ISO 14001 as a management system for the entire Environmental Security program. DoD described its compliance program in the context of its Environmental Security Directive and supporting instructions, and described its requirement that each installation conduct a self audit for environmental performance at least annually. DoD described its enabling systems in the context of the Environmental Security Directive which establishes environmental goals, supporting strategies, budget priorities and measures of merit that support overall organizational objectives. DoD also described its extensive environmental training program which includes military recruit training, technical training programs, professional (officers) military education programs as well as insertion of environmental requirements into the education programs for non environmental professionals whose actions could affect the environment. DoD described its performance and accountability program, and how the Environmental Security Directive establishes goals for compliance, pollution prevention and conservation, and requires periodic reporting on progress towards meeting these goals through measures of merit. DoD personnel regulations require that major job components be identified in job descriptions, and that evaluation criteria for the major job components be prepared in employee's annual work plans. Thus, persons with environmental responsibilities are evaluated on the performance of those responsibilities and outstanding performance by installations and individuals is recognized via an awards

program. DoD also discussed its measurement and improvement strategy which includes implementation of an automated data management system, annual assessments of progress towards achieving the goals established by the Environmental Security Directive, and evaluation/benchmarking of environmental operations in other government and non-government organization which have environmental challenges similar to DoD and CEMP. DoD efforts to improve environmental performance include establishment of hazardous materials pharmacies at installations and ships to provide central control of purchasing, storing, distributing and disposing of hazardous materials, resulting in reduced purchases, disposals, and potential for violations.

The CIA's chief of Environmental Safety endorsed the CEMP, and described its management commitment in the context of establishment of a formal environmental program in FY 1992. The program is designed to gain compliance with environmental regulations and initiate remediation of potential cleanup sites, and has been funded on a multiyear basis and administered by the newly formed Environmental Safety Group. Most recently, the CIA issued an Agency Notice establishing the CIA Pollution Prevention Policy and Goals, with a target of fifty percent reduction in the use of toxic chemicals and a reduction in the use of extremely hazardous substances. The CIA described its proactive compliance program which consists of annual compliance inspections of all CIA sites, compliance audits at some sites, and provision of expert consultation and assistance to field sites to address specific issues. The CIA described its enabling personnel including funding for environmental compliance training programs for specialists, site managers, and selected component personnel, and regular briefings of senior managers on the progress of the program. The CIA has also established a Lotus Notes electronic bulletin board database which provides means to disseminate regulatory updates to field personnel, functions as an inquiry and response forum, and serves as a general discussion media for promoting environmental issues and policies. The CIA described its performance and accountability program, and how all major field sites are staffed with a full-time Environmental Safety Officer (ESO) who implements the environmental program under the direction of the site manager. The ESOs are responsible for coordinating the environmental program among the various tenants located at a site, and have their performance evaluations prepared annually by the site manager and forwarded to the CIA environmental program office for review. accountability. The CIA also discussed its measurement and improvement strategy, including annual programmatic appraisals to assess the status of the CIA environmental program, periodic review by the CIA IG to ensure programmatic compliance with environmental laws and regulations, and prioritization of centrally funded resources to address deficiencies identified by the reviews/appraisals. Annual environmental conferences are also held to assemble field ESOs to review the status of site and CIA programs, and to discuss goals and opportunities for improvement in areas such as pollution prevention, affirmative procurement, waste reduction and recycling.

The remaining 13 responses endorsed the CEMP but were more general in nature. EPA is in the process of following up with these agencies to obtain more specific information about how the agencies plan to implement the CEMP at the facility level. The responses from the Department of Commerce (DoC), Department of Energy (DoE), Department of Interior (DoI), Department of Justice (DoJ), Environmental Protection Agency (EPA), and the National Aeronautics and Space Administration (NASA) addressed the five CEMP principles in varying levels of detail. DoE, DoJ, EPA and NASA explained in general terms how they plan to implement the CEMP at the facility level. DoC, DoE, DoJ and EPA generally described how their agency's management system will meet the CEMP. DoE, DoI, and NASA indicated that their agency's are evaluating the use of ISO 14001 as a management system to meet the CEMP. The responses from the Department of Health and Human Services (HHS), Department of Transportation

(DoTransp.), Department of Treasury (DoTreas.), General Services Administration (GSA), Department of Agriculture (USDA), Veterans Administration (VA), and Tennessee Valley Authority (TVA) addressed the CEMP principles and how the agency's plan to implement the CEMP at the facility level in a very general way. GSA and TVA briefly describe how their agency's management system will meet the CEMP, and DoTreas., indicated that it is evaluating the use of ISO 14001 as a management system to meet the CEMP.

Table 1.
Summary of Agency Responses to Code of Environmental Management Principles (CEMP)

Agency	CEMP endorsed on agency wide basis	Explains plan to implement CEMP at facility level	Describes how alternative system (e.g., ISO 14001) will meet CEMP	Addresses each CEMP principle	Addresses the objectives of each CEMP principle
CIA	Yes	Yes	Yes	Yes	Partial
USDA	Yes	Partial			
DoC	Yes		Partial	Partial	
DoD	Yes	Yes	Yes and evaluating ISO 14001	Yes	Yes
DoE	Yes	Partial	Partial and evaluating ISO 14001	Partial	
DoI	Yes		Evaluating ISO 14001	Partial	
DoJ	Yes	Partial	Partial	Partial	Partial
DoTransp.	Yes				
DoTreas.	Yes	Partial	Evaluating ISO 14001	Partial	
EPA	Yes	Partial	Partial	Partial	
GSA	Yes	Partial	Partial		
HHS	Yes	Partial		Partial	
NASA	Yes	Partial	Evaluating ISO 14001	Partial	
Postal Service	Yes	Yes	Yes and evaluating ISO 14001	Yes	Partial
TVA	Yes		Partial		
VA	Yes	Partial			

CHAPTER 3: MANAGEMENT COMMITMENT (PRINCIPLE 1)

The agency makes a written top-management commitment to improved environmental performance by establishing policies which emphasize pollution prevention and the need to ensure compliance with environmental requirements.

The first Principle stresses the importance of upper-level management in setting the agenda for the agency's commitment to environmental management. Although it is possible for organizations to adopt ideas that originate at the grassroots level, it is more likely that such ideas will be dismissed unless they have a champion with sufficient organizational clout to advance them. Agencies can advance the cause of environmental management by setting policies, ensuring that the environmental system is integrated throughout the agency, and setting a clear example of long-term commitment by articulating support for strategies that enhance environmental stewardship and sustainable development.

PERFORMANCE OBJECTIVES:

1.1 OBTAIN MANAGEMENT SUPPORT

The agency ensures support for the environmental program by management at all levels and assigns responsibility for carrying out the activities of the program.

Management sets the priorities, assigns key personnel, and allocates funding for agency activities. In order to obtain management approval and support, the environmental management program must be seen as vital to the functioning of the organization and as a positive benefit, whether it be in financial terms or in measures such as regulatory compliance status, production efficiency, or worker protection. If management commitment is seen as lacking, environmental concerns will not receive the priority they deserve.

Organizations that consistently demonstrate management support for pollution prevention and environmental compliance generally perform at the highest levels and will be looked upon as leaders that can mentor other organizations wishing to upgrade their environmental performance.

1.1.1 Policy Development

The agency establishes an environmental policy followed by an environmental program that complements its overall mission strategy.

Management must take the lead in developing organizational goals and instilling the attitude that all organization members are responsible for implementing and improving environmental management measures, as well as develop criteria for evaluating

POSTAL SERVICE POLICY

"The United States Postal Service is committed to provide employees and customers with a safe and healthy environment. Environmental protection is the responsible thing to do and makes for sound business practices.

"In performing its mission...the Postal Service will conduct its activities in a manner protecting human

how well overall goals are met. The environmental policy will be the statement that establishes commitments, goals, priorities, and attitudes. It incorporates the organization's mission (purpose), vision (what it plans to become), and core values (principles by which it operates). The environmental policy also addresses the requirements and concerns of stakeholders and how the environmental policy relates to other organizational policies.

POSTAL SERVICE GUIDING PRINCIPLES

1. Meet or exceed all applicable environmental laws and regulations in a cost-effective manner;
2. Incorporate environmental considerations into business planning processes;
3. Foster the sustainable use of natural resources by promoting pollution prevention, reducing waste, recycling, and reusing materials;
4. Expect every employee to take ownership and responsibility for environmental objectives;
5. Work with customers to address mutual environmental concerns;
6. Measure progress in protecting the environment;
7. Encourage suppliers, vendors, and contractors to comply with similar environmental protection policies.

Appropriate steps to address policy development could include:

- ! Develop overall organizational goals and priorities;
- ! Prepare Mission and Vision statements emphasizing commitment;
- ! Communicate with stakeholders, including regulatory agencies, to identify needs, expectations, and concerns.

1.1.2 System Integration

The agency integrates the environmental management system throughout its operations, including its funding and staffing requirements, and reaches out to other organizations.

Management should institutionalize the environmental program within organizational units at all levels and should take steps to measure the organization's performance by incorporating specific environmental performance criteria into managerial and employee performance evaluations, as appropriate.

Organizations that fulfill this principle demonstrate consistent high-level management commitment, integrate an environmental viewpoint into planning and decision-making activities, and ensure the availability of adequate personnel and fiscal resources to meet organizational goals. This involves incorporating environmental performance into decision-making processes along with factors such as cost, efficiency, and productivity.

As one of the main determiners of success or failure, management cannot afford to be isolated from the strategies and activities associated with an organization-wide environmental management program. All levels of management must be responsive to the demands of the program, encourage initiatives to expand its effectiveness, and take proactive steps to integrate program requirements into existing activities across the organization. Management should also seek a leadership role for the organization in order to serve as an example to others wishing to emulate its success. Management backing should also provide organization members with an indication of the organization's place in the global community.

Appropriate steps to address program integration could include:

- ! Identify environmental liabilities and risks;
- ! Conduct an organizational review to assist in integrating the environmental program into all planning, organizing, implementing, and measuring processes;
- ! Assign specific management responsibilities;
- ! Encourage teaming across all divisions within the agency to improve communication and teamwork;
- ! Include environmental performance in the evaluation criteria for organizational units, managers, and employees, as appropriate;
- ! Coordinate and review budget requirements to ensure adequate funding to achieve goals;
- ! Review responsibilities to ensure adequate staffing at all levels;
- ! Assume a leadership role through involvement in outreach activities, such as professional organizations, conferences, information exchanges, local government, and public information sessions;
- ! Provide awareness training to all levels of management and workers.

1.2 ENVIRONMENTAL STEWARDSHIP AND SUSTAINABLE DEVELOPMENT

The agency strives to facilitate a culture of environmental stewardship and sustainable development.

"Environmental Stewardship" refers to the concept that society should recognize the impacts of its activities on environmental conditions and should adopt practices that eliminate or reduce negative environmental impacts. Every aspect of an organization's operations, including strategic planning, procurement, waste reduction, waste management, water and energy usage, responses to existing environmental problems, and land management, must be conducted in such a way as to limit or eliminate adverse impacts on the environment. Government agencies, whose national policies affect a range of complex management decisions and who have been entrusted with the management of the nation's immense and diverse land and water resources, must provide an example to others in implementing programs of environmental stewardship.

The President's Council on Sustainable Development was established on June 29, 1993 by Executive Order 12852. The Council has adopted the definition of sustainable development as: "meeting the needs of the present without compromising the ability of future generations to meet their own needs." The concept was

ECOSYSTEM MANAGEMENT

Ecosystem management is a relatively recent development that has been adopted by several federal agencies. The concept of ecosystem management is a response to the recognition of the inadequacy of the traditional resource-management approach, which focused on individual resources, such as water, land, forest, wildlife, etc. It has become clear in recent years that these seemingly separate components are in fact highly integrated and interdependent. Therefore, the federal government is attempting to tailor its management responsibilities to entire ecosystems, many of which range across legislatively or administratively defined boundaries. It is believed that encouraging consideration of these complex and dynamic systems as complete entities will provide a more coherent framework for resource management and protection, reduce administrative conflict, and better address declining ecological conditions. This approach will require significant interaction and coordination with state and local authorities

developed to provide insight into the way in which natural resources and systems (rainforests, atmospheric conditions, natural water bodies, etc.) are integrated within the environment and how that relationship is affected by the use of the resources. It is hoped that this understanding will lead to a new level of consciousness in which use of natural resources is limited to identifiable needs, original conditions are restored as much as possible, and waste material is managed in an environmentally friendly manner, all of which will help to ensure the presence of these resources for future generations.

INTERAGENCY COOPERATION IN ECOSYSTEM MANAGEMENT

Fourteen federal agencies came together to sign the "Memorandum of Understanding to Foster the Ecosystem Approach" (December 15, 1995). The MOU defines the Ecosystem Approach as:

- ! a method for sustaining or restoring ecological systems;
- ! goal driven;
- ! based on a vision of desired future conditions that integrates ecological, economic, and social factors;
- ! applied within a geographic framework defined primarily by ecological boundaries.

The goal of the Ecosystem Approach is to "restore and sustain the health, productivity, and biological diversity of ecosystems and the overall quality of life through a natural resource management approach that is fully integrated with social and economic goals."

The signatories agree that federal agencies should

- ! provide leadership in and cooperate with activities that foster the Ecosystem Approach;
- ! ensure that they utilize their authorities in a way that facilitates the Ecosystem Approach;
- ! administer their programs in a manner that is sensitive to the needs and rights of landowners, local communities, and the public;
- ! work with landowners, local communities, and the public to achieve common goals.

Responsible environmental management should be one of the main pillars of the organization, not an ancillary concern or afterthought. Personnel at all levels need to be "on the same page" when it comes to environmental issues. In order to generate this level of awareness, personnel need to have some understanding of environmental issues, how they are related to the organization's activities, and the consequences of inaction or negative action. Where possible, the organization should attempt to supplement information on specific regulatory, compliance, or management concerns by providing a global perspective in its presentation of environmental issues that encompasses concepts such as sustainable development and ecosystem management. The organization's culture should be extended to draw in the surrounding community, in which personnel are likely to reside.

An organization's commitment to environmental stewardship and sustainable development would be demonstrated through implementation of several of the CEMP Principles and their respective Performance Objectives. For example, by implementing pollution prevention and resource conservation measures (see Principle 2, Performance Objective 2.3), the agency can reduce its negative environmental impacts resulting directly from its facilities. In addition, by including the concepts of environmental protection and sustainability in its policies, the agency can help develop the culture of environmental stewardship and sustainable development not only within the agency but also to those parts of society that are affected by the agency's activities.

Appropriate steps in creating a culture of environmental stewardship could include:

- ! Provide orientation describing the program for all personnel;
- ! Encourage each organizational group to prepare an environmental action plan, which will describe the steps the group will implement to improve environmental performance and what will be achieved;
- ! Introduce the concepts of life-cycle analysis and design for the environment to the agency, focusing on groups with responsibilities in potentially affected areas (e.g., procurement or engineering);
- ! Provide outside speakers describing issues of environmental concern and how they relate to the agency;
- ! Provide in-house "brown bag" speakers from various aspects of the agency describing their responsibilities;
- ! Create newsletters and other promotional items describing the progress of the program and how it benefits the agency;
- ! Encourage organizational sponsorship of outside activities with environmental content, such as "Clean up days" or school visits;
- ! Promote "Open House" days for the local community;
- ! Participate in local government hearings and other activities;
- ! Implement a program that demonstrates commitment to sustainable development and renewable resources by planting trees or other such activity;
- ! Incorporate evaluations of environmental implications of proposed activities into decision-making processes.

ECOSYSTEM CASE STUDIES

The Interagency Ecosystem Management Task Force has conducted case studies in seven areas facing extreme environmental stress:

- ! Anacostia River watershed;
- ! Coastal Louisiana;
- ! Great Lakes basin;
- ! Pacific Northwest forests;
- ! Prince William Sound;
- ! South Florida; and
- ! Southern Appalachians.

CHAPTER 4: COMPLIANCE ASSURANCE AND POLLUTION PREVENTION (PRINCIPLE 2)

The agency implements proactive programs that aggressively identify and address potential compliance problem areas and utilize pollution prevention approaches to correct deficiencies and improve environmental performance.

The second Principle addresses what might be considered the core of environmental management. Whatever an agency's approach to environmental management, it must always meet the obligation of compliance with regulations. The CEMP is intended to help agencies more easily meet this obligation and expand their vision "beyond compliance." Aggressive pollution prevention strategies will also be central to maintaining compliance, improving environmental performance, reducing risks, and cutting costs. Preparation for emergency situations can also help avoid breakdowns in compliance and pollution control.

PERFORMANCE OBJECTIVES:

2.1 COMPLIANCE ASSURANCE

The agency institutes support programs to ensure compliance with environmental regulations and encourages setting goals beyond compliance.

Implementation of an environmental management program should be a clear signal that non-compliance with regulations and established procedures is unacceptable and injurious to the operation and reputation of the organization. Satisfaction of this performance objective requires a clear and distinct compliance management system as a component of the agency's overall environmental management system.

All personnel, beginning with management, must understand that the objective of a compliance program is not to set up obstacles that prevent

COMPLIANCE ASSURANCE...

Environmental compliance can be a sensitive subject, and not one that many organizations eagerly address. Environmental regulations have been characterized by some as unnecessary, burdensome, overly costly, stifling of creativity, and ineffective. Federal facilities, which were not a primary focus of many of the environmental statutes but have come under their jurisdiction, may consider these descriptions particularly appropriate.

However, EPA and other regulatory agencies weigh the societal benefits of regulation against the societal burden of compliance, taking into account the best available scientific information. Admittedly, it can be difficult to assign a dollar figure to improved air or water quality, and many issues are not easily resolved by science, such as the effects of dioxins on living tissue.

The lack of an underlying regulatory structure can be seen in the legacy of contamination at CERCLA sites and many Federal facilities. Compliance with regulations must be a core value of any organization. Federal agencies, which are endowed with the public trust, should give no more thought to violating environmental rules than they would to distributing sensitive information or disregarding contracting, procurement, and other financial requirements.

meaningful work from being accomplished, but to guide the organization through complex and often

uncertain terrain to the successful completion of tasks. Early incorporation of a compliance perspective will prevent unpleasant and costly surprises later in a project's schedule. The environmental management program must also encourage forward-thinking to go beyond simple compliance, as the organization will be constantly playing catch-up to meet stricter standards. For example, the agency should stress the importance of the environmental compliance performance of its outside contractors and suppliers, perhaps by encouraging (and eventually requiring) their adherence to a specified set of environmental management principles.

An agency that fully incorporates the tenets of this principle demonstrates maintainable regulatory compliance and addresses occasions of non-compliance swiftly and efficiently. It also has established a proactive approach to compliance through tracking and early identification of regulatory trends and initiatives and maintains effective communications with both regulatory authorities and internally to coordinate responses to those initiatives. It also requires that contractors demonstrate their commitment to responsible environmental management and provides guidance to meet specified standards.

Appropriate steps to ensure compliance could include:

- ! Develop an independent compliance group, with clear assignment of responsibility and appropriate authority;
- ! Review organizational activities in the context of Federal, state, and local regulations;
- ! Assess compliance status to establish a baseline (performing compliance audits can help with this step);
- ! Establish a compliance management system that is integrated with the overall environmental management system;
- ! Track regulatory initiatives to identify future compliance issues;

...AND "BEYOND COMPLIANCE"

Supporters of Environmental Management Systems and other "quality" approaches to environmental management often speak of the need to go "beyond compliance." What does this mean? Are there different levels of compliance, rather than just "in" or "out of" compliance? What can be found "beyond compliance"?

"Beyond compliance" is recognition that much of the activity that falls under environmental programs is driven by regulations. Permits are requested, forms are filled out, reports are filed, to comply with regulation. But accepting compliance as a core value doesn't preclude looking for ways to make it easier, less costly, and less pervasive.

Although an EMS is a management system, not a compliance system, the benefit of an EMS is that it forces a look at all activities that can have an environmental impact and provides an integrating structure for supporting activities that are not strictly environmental in nature, such as training and documentation. This "holistic" approach provides a context in which the core of compliance can incorporate the organization mission and vision. It encourages participation at all levels to improve and coordinate management, rather than a "do this because it's required" directive.

A 1993 survey of six major corporations found that facilities spent more on compliance than on pollution prevention, but would rather have the ratio heavily weighted toward pollution prevention (*Source: Business Roundtable*). A "beyond compliance" approach can help to reallocate resources to priority areas without sacrificing compliance. "Beyond compliance" also includes working with regulators to form mutually beneficial partnerships, rather than approaching them as adversaries.

- ! Hold information sessions to explain the purpose and function of the compliance group;
- ! Develop guidance for operations to maintain compliance;
- ! Inform and coordinate with regulatory authorities as necessary;
- ! Evaluate the environmental and safety performance of outside contractors;
- ! Develop a program that encourages employees to report knowledge of environmental violations, departures from procedure, or criminal conduct, and that maintains employee confidentiality;
- ! Take immediate action to address conditions identified as giving rise to incidents resulting in non-compliance;
- ! Plan, track, schedule, and report on corrective actions;
- ! Develop procedures to elevate compliance issues to upper management, when necessary.

Appropriate steps to move beyond compliance could include:

- ! Make pollution prevention the primary approach for addressing environmental issues;
- ! Implement an effective system to keep environmental recordkeeping up-to-date;
- ! Utilize quality management tools and procedures to identify potential problems and prevent incidents resulting in non-compliance;
- ! Develop regular contacts with regulatory authorities to proactively identify and prepare for future compliance issues;
- ! Ensure that information on applicable regulations and permit limitations is communicated and understood;
- ! Set performance goals that improve upon compliance standards;
- ! Introduce risk assessment considerations into compliance situations, where appropriate.

2.2 EMERGENCY PREPAREDNESS

The agency develops and implements a program to address contingency planning and emergency response situations.

Emergency preparedness is not only required by law, it is good business. Properly maintained facilities and trained personnel will help to limit property damage, lost-time injuries, and process down time. Personnel should understand the use of fire extinguishers and other such equipment and know whom to call, where to go, what to do, and (most importantly) what not to do. Simulated spill-response and other such exercises are invaluable in limiting damage due to "upset conditions." In addressing the environmental consequences of spills and other incidents, procedures should incorporate an understanding of concepts such as ecosystem management that can be applied to limit damage.

The emergency response program will also be the most likely mechanism for integrating the environmental program with the organization's operational health and safety procedures. Sound worker safety practices will help to limit situations that could result in environmental damage as well as worker injuries.

Commitment to this principle is demonstrated by the institution of formal emergency-response procedures (including appropriate training) and the appropriate links between health and safety programs (e.g., medical monitoring for federal employees performing hazardous site work).

Appropriate steps in development of an emergency preparedness program could include:

- ! Develop procedures to address accidents, fires, spills, meteorological, seismological, radiological incidents, etc.;
- ! Develop a disaster preparedness plan that details procedures to be followed at all of the agency's facilities;
- ! Identify hazards associated with the activities of the agency and its facilities (e.g., chemicals, equipment, transportation);
- ! Devise appropriate measures to address and mitigate identified hazards (risk management), and coordinate these measures with generic procedures;
- ! Implement a preventive maintenance program for all equipment;
- ! Identify an Emergency Management Team (EMT), with clear managerial responsibility;
- ! Provide appropriate training for the EMT and other personnel;
- ! Conduct exercises on a regular basis;
- ! Develop an in-house program that provides medical monitoring for "high-risk" employees and emergency treatment services as appropriate;
- ! Coordinate with local fire, law enforcement, and medical authorities;
- ! Develop a communication plan that outlines the coordination with local fire, law enforcement, and medical authorities;
- ! Identify available resources during emergency situations including lines of authority (e.g., emergency procurement authority) for responding to and mitigating emergency situations.

2.3 POLLUTION PREVENTION AND RESOURCE CONSERVATION

The agency develops a program to address pollution prevention and resource conservation issues.

An organization with a fully-developed pollution prevention program ultimately can save time and money, and reduce its liability. Use of environmentally-friendly materials is also friendly to the organization's reputation and reinforces the idea that the organization is a responsible

POLLUTION PREVENTION TOOLS

As interest in pollution prevention grows, and organizations look to move beyond the "low-hanging fruit," it becomes increasingly important to find ways to evaluate the potential benefits of competing approaches. Two such tools are *Life Cycle Analysis* (LCA) and *Total Cost Assessment* (TCA).

Life Cycle Analysis generally focuses on the environmental aspects of a specific product (although it could be applied to processes or services) over its lifetime. LCA looks at each stage from raw material through production, use, and disposal. Inputs to the analysis include energy use, waste generation, emissions, and releases from each stage.

Total Cost Assessment focuses on the economics of a given situation, including costs related to environmental variables. For example, TCA might compare the cost of retrofitting to address increased emissions with the cost of additional waste treatment and disposal for two alternatives.

A number of publications give further detail on LCA and TCA. A starting point for Federal agencies could be *Federal Facility Pollution Prevention Project Analysis: A Primer for Applying Life Cycle and Total Cost Assessment Concepts*, EPA 300-B-95-008, July 1995.

citizen. Reducing exposure to toxics through material substitution or process modifications and improvements also benefits employee health and can improve morale. Although source reduction should be the primary focus of pollution prevention, recycling and reuse programs should also be aggressively pursued and promoted.

NATIONAL PERFORMANCE REVIEW

In 1993, the National Performance Review examined the Federal role in environmental protection and degradation. Specifically, the NPR looked at ways to improve the Federal ability to:

- ! promote sustainable economic development;
- ! prevent environmental degradation;
- ! reduce costs; and
- ! maintain the long-term health of the nation's ecological systems.

The NPR made four specific recommendations in two broad areas (see related boxes).

In order to be fully effective, pollution prevention programs must be integrated throughout the organization's activities. All personnel should be encouraged to identify additional opportunities for pollution prevention initiatives. Energy conservation efforts can often be paired effectively with pollution prevention concerns, as can parallel programs to identify conservation opportunities for water and other resources. The pollution prevention/resource conservation program can be employed as a strong indicator of the organization's commitment to sustainable development. Incorporation of concepts such as life-cycle analysis and total cost assessment can help to identify preservation or conservation opportunities.

An organization committed to pollution prevention has a formal program describing procedures, strategies, and goals. In connection with the formal program, the most advanced organizations have implemented policy that encourages employees to actively identify and pursue pollution prevention and resource conservation measures, and instituted procedures to incorporate such measures into the formal program. Resource conservation practices would address the use by the agency of energy, water, and transportation resources, among others. Greater efficiency in using natural resources will also help to cut pollution (e.g., lowered emissions from power generation and vehicles, lessened need for wastewater treatment) and related costs. Pollution prevention policies and practices should follow the environmental management hierarchy prescribed in the Pollution Prevention Act of 1990 [Figure 2]: 1) source reduction; 2) recycling; 3) treatment; and 4) disposal.

Section 3-301(b) of Executive Order 12856 requires the head of each federal agency to make a commitment to utilizing pollution prevention through source reduction, where practicable, as "the primary means of achieving and maintaining compliance with all applicable federal, state and local

Pollution Prevention Act
Environmental Management Hierarchy

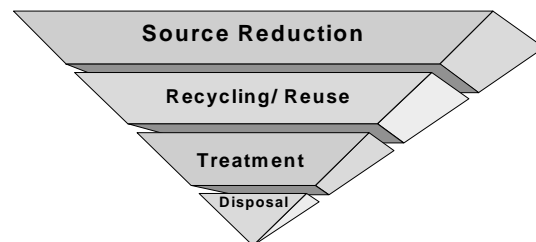


Figure 2

environmental requirements." Making this critical link between pollution prevention and compliance assurance is the key to achieving and maintaining a "beyond compliance" state. An integrated environmental management system can help agencies make this link.

It is equally important to understand the link between pollution prevention and resource conservation, and the cyclical nature of this relationship. For example, agriculture has been identified as a principal source of non-point source water pollution, mainly through run-off that increases sedimentation in waterways and deposits large amounts of pesticides, nitrates, phosphates, and other compounds. The soil's productive capability is diminished and water quality degraded, with the result that greater amounts of pesticides and fertilizers are needed to maintain crop yields, and water supplies may eventually be unsuitable for irrigation (e.g., through increased salinity). However, more strategic approaches to irrigation that reduce run-off can both reduce water usage and preserve water quality, while maintaining greater amounts of productive soil.

NPR RECOMMENDATIONS

Improve Implementation of Environmental Management

1. *Improve Federal Decisionmaking Through Environmental Cost Accounting* - use of tools such as Life Cycle Analysis and Total Cost Assessment, discussed earlier, is increasing among Federal agencies. A number of software packages have also been developed to address this issue.
2. *Develop Cross-Agency Ecosystem Planning and Management* - the "MOU to Foster the Ecosystem Approach," described under Principle 1, demonstrates progress in this area.

NPR RECOMMENDATIONS (cont.)

Improve Environmental Performance at Federal Buildings and Facilities

3. *Increase Energy and Water Efficiency* - Executive Order 12902 calls for Federal buildings to use 30% less energy, become 20% more energy efficient, increase use of renewable energy sources, incorporate water conservation goals, and undertake energy and water audits.
4. *Increase Environmentally and Economically Beneficial Landscaping* - the President issued a "Memorandum on Environmentally Beneficial Landscaping" (April 26, 1996) directing Federal agencies to use regionally native plants, minimize adverse effects on native habitat, use integrated pest management practices, and use water-efficient landscaping practices.

Similarly, new techniques are being employed to reduce the impacts of pesticide usage and livestock management. Integrated pest management approaches that utilize both biological (breeding pest-resistant strains, selective introduction of pest predators) and strategic planting (crop rotation, timing of planting, removing land from production for a period) methods can decrease reliance on chemical pesticides.

Prevention of livestock waste material is not a realistic goal, but it can be appropriately managed to lessen environmental impacts.

Another approach is to encourage the growth of natural vegetation along waterways to act as a natural filter for run-off, to act as a barrier that prevents livestock from directly

contaminating the water, and to help absorb greenhouse gases produced by livestock and through

clearing of land. Resource conservation strategies should be consistent with the agency's approach to environmental stewardship and sustainable development (see Principle 1).

A number of initiatives over the past several years have boosted federal agency participation in pollution prevention and resource conservation activities. Many originate from agency missions, such as EPA's 33/50, Energy Star, and Green Lights programs, the Department of Energy's Federal Relighting Initiative, and the New Technology Demonstration Program, which is sponsored by DOE and the Department of Defense through the Strategic Environmental Research and Development Program (SERDP). Others arise from statute or directive, such as Executive Order 12856, which requires federal agencies to develop facility-wide pollution prevention plans and report releases and transfers of toxic chemicals to the Toxic Release Inventory (TRI), and Executive Order 12902, which sets targets for reducing energy use and increasing energy efficiency in federal buildings, encourages use of renewable energy sources, and requires Federal agencies to evaluate opportunities for water conservation and develop plans for comprehensive energy and water audits at their facilities.

Appropriate steps in developing a pollution prevention/resource conservation program could include:

- ! Implement a program to identify and evaluate pollution prevention opportunities that emphasizes source reduction as the policy and practice of first choice;
- ! Implement a program to identify and evaluate energy conservation opportunities;
- ! Implement a program to identify and evaluate opportunities to conserve other resources, such as water;
- ! Implement an affirmative procurement program to address use of recycled-content materials;
- ! Identify and implement opportunities to reduce the use of toxic materials;
- ! Perform life-cycle analyses to assess overall environmental impacts;
- ! Incorporate design for the environment principles into activities, as appropriate;
- ! Implement a system of product stewardship;
- ! Implement a "Repair or Replace" program to track the condition of capital equipment;
- ! Institute recycling programs for glass, plastic, aluminum, cardboard, paper, and other waste streams;
- ! Encourage reuse of paper and other materials.

CHAPTER 5: ENABLING SYSTEMS (PRINCIPLE 3)

The agency develops and implements the necessary measures to enable personnel to perform their functions consistent with regulatory requirements, agency environmental policies, and its overall mission.

The third Principle concerns the underlying or supporting functions for an environmental management system. These functions are generic in the sense that they support any type of management system, but are critical to the system's effectiveness and success. Functions falling under this Principle include training, operating procedures, technical standards, goal-setting, communication, information management, and documentation.

PERFORMANCE OBJECTIVES:

3.1 TRAINING

The agency ensures that personnel are fully trained to carry out the environmental responsibilities of their positions.

Comprehensive training is crucial to the success of any enterprise. People need to know what they are expected to do and how they are expected to do it. Organizations that attempt to save time or money by limiting training often exceed those savings through non-compliance, rework, remediation of contaminated sites, or lost-time injuries. Trained personnel are better able to understand the processes for which they are responsible and are therefore more likely to offer suggestions to improve those processes.

Training for those expected to oversee the environmental management program must receive equal priority with training for those whose functions are central to the organization's primary mission. However, training in environmental subjects should not be limited to those directly involved with the program, but should be extended to all employees as appropriate. For example, an environmental training program may take a three-phase approach: 1) awareness training to introduce all employees to the environmental program; 2) mandatory training for personnel directly involved with the program (e.g., RCRA 262, 264, 265 and/or OSHA 40-hour training); and 3) skills training for personnel operating equipment or for other specific tasks. Refresher training offered on a regular basis is also an important component of any training program.

An organization will be operating at the highest level when it has an established training program that provides instruction to all employees sufficient to perform the environmental aspects of their jobs, tracks training status and requirements, and offers refresher training on a periodic basis.

Appropriate steps in development of a training program could include:

- ! Develop a "Core Curriculum" that is required of all personnel;
- ! Identify additional job-specific training requirements;
- ! Determine availability of outside training vs. desirability of "in-house" training;
- ! Establish an in-house training group to be responsible for tracking the program;
- ! Train the trainers, if necessary;
- ! Establish periodic refresher training (e.g., 8-hour vs. 40-hour OSHA training);
- ! Develop methods to obtain feedback from employees and assess the effectiveness of the training;
- ! Investigate alternative training methods, such as computer-based or video conference training;
- ! Encourage continuing education for employees, such as seminars, trade shows, and college courses.

3.2 STRUCTURAL SUPPORTS

The agency develops and implements procedures, standards, systems, programs, and objectives that enhance environmental performance and support positive achievement of organizational environmental and mission goals.

Clear procedures, standards, systems, programs, and short- and long-term objectives must be in place for the organization to fulfill its vision of environmental responsibility. The commitment to responsible environmental management should be prominent within the organization's Mission and Vision statements. The interrelationship and interdependence of environmental concerns with all other activities needs to be spelled out in such a way as to infuse the organization with environmental consciousness. It must also be clear how the organization's method of operation will help to support the concept of environmental stewardship.

A streamlined set of procedures, standards, systems, programs, and goals that describe and support the organization's commitment to responsible environmental management and further the organization's mission demonstrate conformance with this principle.

Appropriate steps in developing clear organizational documentation could include:

- ! Review organizational documentation for clarity, conciseness, conflict, and redundancy;
- ! Eliminate or revise procedures, standards, systems, programs, and goals determined to be barriers to organizational goals;
- ! Encourage constructive input from all personnel;
- ! Pursue integration of the environmental program throughout the agency;
- ! Conduct periodic review of procedures, etc. to ensure currency.

WEAVING THE WEB INTERNALLY...

Many organizations are using the World Wide Web (WWW) to disseminate environmental and other information to the people who carry out their missions. Most federal agencies have a presence on the Web, many with very sophisticated links to information of interest. EPA, for example, uses its EnviroSense pages to describe EPA programs and policies, provide points of contact, and point to environmental information provided by other agencies and the private sector. EPA's EnviroSense is available on the Web at www.epa.gov/envirosense.

Agencies use their Web pages to post bulletins, notices on meetings, reports on internal task forces, etc. Some post electronic versions of internal directives, technical standards, and procedures (e.g., audit protocols). In this way, personnel across the agency can be sure that they have the most current version of a document, and that it is the same version used by other agency locations.

3.3 INFORMATION MANAGEMENT, COMMUNICATION, DOCUMENTATION

The agency develops and implements systems that encourage efficient management of environmentally-related information, communication, and documentation.

Information management, communication, and documentation are necessary elements of an effective environmental management program. The need for advanced information management capabilities has grown significantly to keep pace with the volume of available information to be sifted, analyzed, and integrated. The ability to swiftly and efficiently digest data and respond to rapidly changing conditions can be key to the continued success of an organization. For example, an integrated information management system may be used to track process requirements, procedures, measurements, compliance standards, and compliance status. The effects of process changes can be followed and incidents resulting in non-compliance quickly rectified. Generation of reports is also greatly simplified, reducing demand on time, personnel, and financial resources. Many private and public organizations have taken advantage of the explosion in networking capabilities to make

information available through the Internet (particularly the World Wide Web), organization intranets (internal networks that utilize Internet technologies), and other commercial group software packages.

Federal Agency Environmental Compliance Management System

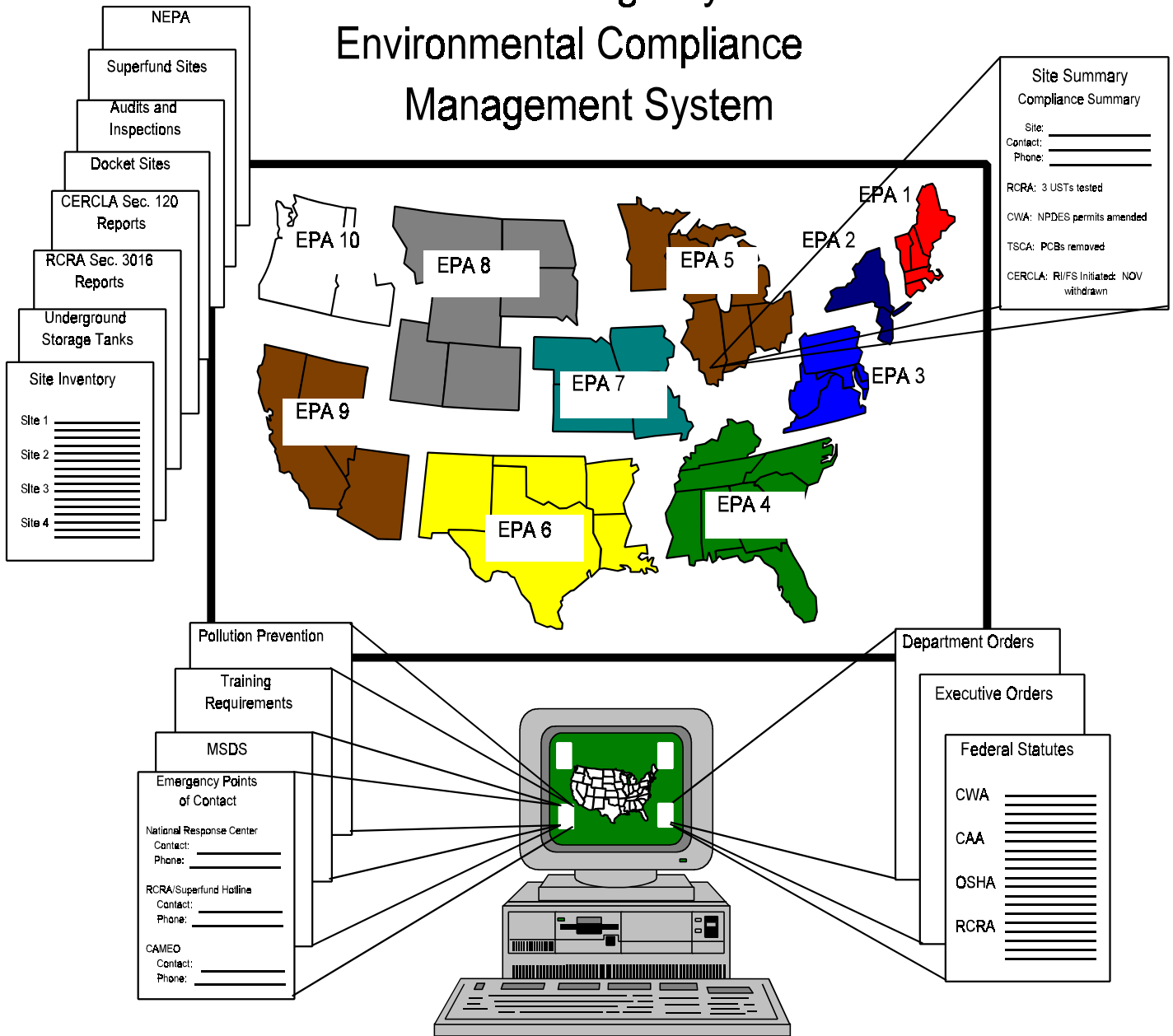


Figure 3

Figure 3 offers a conceptual depiction of the multiple sources of environmental information that can be maintained, coordinated, and combined through sophisticated information management using such technologies.

Information management capabilities include not only hardware and software concerns, but also people who are able to understand the information, draw informed conclusions, and make intelligent decisions and recommendations. Integrating information

...AND WITH STAKEHOLDERS

Agencies also find the Web helpful in communicating with stakeholders. As an example, DOE has made available large amounts of information related to its investigations of Human Radiation Experimentation (HREX). Electronic public-access information areas can save agencies the resources that would be necessary to generate and distribute thousands of pages of text that must be continually updated. Special care must be taken, however, to ensure that sensitive information is properly excised before making it available.

Agencies can also fulfill much of their public assistance responsibilities electronically. For example, both the DOE Pollution Prevention Information Clearinghouse (EPIC) and EPA's Enviro\$en\$e pages provide the public with information on pollution prevention, energy efficiency, and other environmental assistance information through case studies, reports, event calendars, notices of newly available documents, etc. Under EPA's Enviro\$en\$e, the Federal Facilities Environmental Leadership Exchange (FFLEX) provides pollution prevention strategies and other information of interest to the public sector. Similarly, although not environmentally-related, the Internal

management capabilities throughout the organization will help to ensure that no part of the organization is left behind. A drawback to rapid technological advances, such as those exemplified by the use of the Internet, is that they tend to create "tiers" within organizations. At the top of the organization are the traditional decision-makers, who obtain the bulk of their information through briefings, status reports, and assignments to staff that have specific information-gathering functions. These people will generally continue to receive information through these specialized channels.

The next tier is often the sectional or line managers, who may be responsible for reports or briefings to top management, but are also responsible for some level of daily operations. These people often find that rapid technological advances can make their functions more difficult, at least initially. They find that the people they are managing are using unfamiliar technologies in ways they don't understand, while their "tried and true" methods of gathering and evaluating information are being phased out or are suddenly seen as inadequate. Their survival may depend on how quickly they can adapt to the new technology.

The third tier consists of personnel who are at the "cutting edge" of technological advances, whether they are responsible for development and implementation or simply use the technology in their daily activities. The people at this level will ultimately determine how widely a technology is adopted by demonstrating its value in meeting the needs of the organization. The lowest tier generally consists of personnel who do not have access to the technology, such as people in remote field offices or very old buildings. Their ability to function may be severely hampered. Agencies need to be

aware of this "tiering" effect and take steps to address it in order to maintain smooth operations to the extent possible.

Effective communication allows coordination among the various parts of the organization, ensures that activities are more clearly focused, enhances consistency, and limits duplication of effort. Complete documentation and recordkeeping improves regulatory compliance efforts, clarifies responsibilities, and enhances tracking of processes.

Organizations adopting this principle have developed a sophisticated information gathering and dissemination system that supports tracking of performance through measurement and reporting. They also have an effective internal and external communication system that is used to keep the organization informed regarding issues of environmental concern and to maintain open and regular communication with regulatory authorities and the public. Those organizations operating at the highest level ensure that employees have access to necessary information and implement measures to encourage employees to voice concerns and suggestions.

Appropriate steps in developing information management, communication, and documentation capabilities could include:

Information Management:

- ! Assign managerial responsibility for information management;
- ! Create an in-house group to identify equipment needs, new developments, and trends in information management;
- ! Review current capabilities to determine whether they are sufficient to meet expected needs;
- ! Streamline and integrate existing technology to ensure that all personnel have compatible capabilities;
- ! Develop procedures for evaluating new information management projects;
- ! Assign a "shepherd" (project point of contact) for each new initiative;
- ! Develop procedures for collection, management, and dissemination of information obtained through the environmental program (routine reports and audits);
- ! Establish a Resource Center that includes regulations, guidance documents, and other publications relating to environmental management;
- ! Implement the use of electronic networks including on-line databases and libraries (see Figure 3);
- ! Identify key environmental records and documents to be managed and inventoried;
- ! Develop procedures to assure validity of environmental data;
- ! Develop secure procedures for handling, manipulating, and maintaining environmental data;
- ! Develop methods to employ environmental management system data in strategic decision making.

Communication:

- ! Develop a clearly delineated organizational structure indicating desired lines of communication;

- ! Assign each organizational group a "shepherd" within the environmental program to act as the group's point of contact on the environmental program;
- ! Develop efficient in-house communication through the use of voice mail, electronic mail, and inter-office mail;
- ! Provide regular status updates on organizational activities through the use of newsletters, electronic bulletin boards, etc.;
- ! Provide a "shepherd" (project point of contact) for each major initiative;
- ! Develop a formal system to allow personnel to anonymously communicate (without fear of retribution) environmental concerns to upper levels of management for resolution;
- ! Develop a communication network with other organizations (both public and private), as appropriate;
- ! Develop a public outreach program that can encourage public participation, where appropriate;
- ! Develop channels to encourage cooperation, commitment, and solicit employee environmental concerns;
- ! Develop a communications network to report environmental performance to stakeholders and that can address compliance and emergency response situations;
- ! Ensure that effective working relationships exist between environmental staff of headquarters and field units as well as between staff and line personnel whose responsibilities directly impact environmental performance.

Documentation:

- ! Develop a centralized filing system;
- ! Develop an appropriate distribution network for documents;
- ! Develop procedures for completion of all reports;
- ! Develop quality assurance and security procedures for documentation;
- ! Maintain documentation on the properties of materials used by the organization, such as Material Safety Data Sheets (MSDS).

CHAPTER 6: PERFORMANCE AND ACCOUNTABILITY (PRINCIPLE 4)

The agency develops measures to address employee environmental performance, and ensure full accountability of environmental functions.

The fourth Principle concerns the need to lay out the organizational structure and lines of responsibility for the environmental system. Without a clear structure showing who's in charge and who's accountable for getting things done, the system components won't mesh as well as they should and the benefits of the system will be reduced. Putting expectations into individual performance standards is one way to ensure that people are aware of their responsibilities.

PERFORMANCE OBJECTIVES:

4.1 RESPONSIBILITY, AUTHORITY AND ACCOUNTABILITY

The agency ensures that personnel are assigned the necessary authority, accountability, and responsibilities to address environmental performance, and that employee input is solicited.

At all levels, those personnel designated as responsible for completing tasks must also receive the requisite authority to carry out those tasks, whether it be in requisitioning supplies or identifying the need for additional personnel. Similarly, employees must be held accountable for their environmental performance. Employee acceptance of accountability is improved when input is solicited. Encouraging employees to identify barriers to effective performance and to offer suggestions for improvement provides a feeling of teamwork and a sense that they control their own destiny, rather than having it imposed from above.

Appropriate steps in addressing responsibility issues could include:

- ! Assign specific individuals who are senior management or above at the agency the authority to ensure compliance with established environmental standards and procedures;
- ! Issue clear statements defining responsibilities for personnel and groups within the agency that are directly involved in the environmental program (these statements should tie into the agency's mission and vision statements that stress the importance of environmentally responsible operation);
- ! Issue, as necessary, statements defining the authority for carrying out assigned responsibilities;
- ! Prepare a process for addressing conflicting spheres of authority;
- ! Develop a policy detailing the agency's approach to accountability;
- ! Develop a program to solicit employee input and address concerns.

REWARDS...

"Four of 17 [Civilian Federal Agencies] reported the use of award programs to recognize employee environmental achievements. Expanding the use of these programs is needed, and may be a relatively easy way for CFAs to begin to improve their performance..."

EPA EMS Benchmark Report, December 1994

4.2 PERFORMANCE STANDARDS

The agency ensures that employee performance standards, efficiency ratings, or other accountability measures, are clearly defined to include environmental issues as appropriate, and that exceptional performance is recognized and rewarded.

A major barrier to efficient operation is a lack of specificity regarding employee expectations. Therefore, performance criteria relating to environmental practices should be specifically incorporated into employee evaluations, and employees should be rewarded for satisfying or exceeding those criteria. Performance incentives give people the feeling that their contributions are important. Employees who feel valued pay more attention to their work and perform at a higher level. As noted above, providing employees with avenues for constructive input, and the expectation that they will provide such input, spreads an attitude of ownership. In addition, the agency's written policies defining standards and procedures to be followed by its employees must be consistently enforced through appropriate disciplinary mechanisms.

....AND PITFALLS...

...to be avoided in developing performance incentives or awards. Some management experts believe that incentives simply cannot work in any meaningful way. How can this be true? Some objections are that incentives:

- ! do not motivate beyond short-term compliance;
- ! don't differ from punitive management;
- ! can harm relationships;
- ! don't address root causes;
- ! impede management's ability to manage;
- ! discourage creativity;
- ! undermine intrinsic motivation.

Agencies developing incentive or awards programs need to give careful thought to the outcomes they want to encourage, not just behaviors.

Organizations that identify specific environmental performance measures (where appropriate), evaluate employee performance against those measures, take appropriate disciplinary action when agency procedures are violated, and publicly recognize and reward employees for excellent environmental performance through a formal program demonstrate conformance with this principle.

Appropriate steps in developing performance evaluations could include:

- ! Identify appropriate organizational performance goals;
- ! Develop standards upon which employee evaluations will be based;
- ! Publicize and solicit input from the agency;
- ! Develop procedures for evaluating performance;
- ! Prepare a program to reward or recognize honorees;
- ! Prepare disciplinary mechanisms to be utilized when agency policy and procedures are not followed.

CHAPTER 7: MEASUREMENT AND IMPROVEMENT (PRINCIPLE 5)

The agency develops and implements a program to assess progress toward meeting its environmental goals and uses the results to improve environmental performance.

The fifth Principle addresses the "feedback" aspect that is critical to any system and the importance of collecting internal and external information on system performance. When the agency can judge how well the system is working, it can also identify steps to improve the system. The measurement-improvement cycle is continuous for the life of the system.

PERFORMANCE OBJECTIVES:

5.1 EVALUATE PERFORMANCE

The agency develops a program to assess environmental performance and analyze information resulting from those evaluations to identify areas in which performance is or is likely to become substandard.

Measurement of performance is necessary to understand how well the organization is meeting its stated goals. Businesses often measure their performance by such indicators as net profit, sales volume, or production. Two approaches to performance measurement are discussed below.

5.1.1 Gather and Analyze Data

The agency institutes a systematic program to periodically obtain information on environmental operations and evaluate environmental performance against legal requirements and stated objectives, and develops procedures to process the resulting information.

Managers should be expected to provide much of the necessary information on performance through routine activity reports that include environmental issues.

Performance of organizations and individuals in comparison to accepted standards can also be accomplished through periodic environmental audits or other assessment activities.

Assessments can be performed by members of the organization or by an outside group brought in for the specific purpose of evaluating the organization.

In order to be fully effective, measurable performance indicators (activities to be performed or results to be achieved) against which the organization's performance can be

compared must be identified. However, assessments that concentrate solely on numerical "accounting" issues will tell only part of the story and may miss vital information. Assessments will need to evaluate the effectiveness of the overall management system, even if this aspect is not directly quantifiable. Various audit protocols have been developed by Federal agencies and private concerns. EPA is in the process of revising its *Generic Protocols for Conducting Environmental Audits at Federal Facilities*, which incorporates information from other agencies.

The operation of a fully-functioning system of regular evaluation of environmental performance along with standard procedures to analyze and use information gathered during evaluations signal an organization's conformance with this principle.

MEASURING PERFORMANCE

When choosing performance indicators, think about whether they:

- ! Address key organizational goals;
- ! Can show performance trends;
- ! Provide directly usable information;
- ! Are controlled by the group being measured;
- ! Show the way to improve performance.

COMPLIANCE VS. CONFORMANCE

Agencies should be aware that their EMS, as well as their performance, needs to be evaluated. While they will continue to audit their environmental activities for *compliance* with regulations, the EMS must be audited for *conformance* with the system as designed. That is, how well does the *system* match with the agency's plan (e.g., in terms of training, documentation, policy development)? Whether an EMS Standard like ISO 14001, or an EMS of the agency's own design, this is a crucial step in maintaining and improving a fully-functional EMS.

Appropriate steps to address performance measurement could include:

- ! Develop, collect data, and report on measurable performance indicators for each organizational activity;
 - ! Develop an internal environmental audit program;
 - ! Identify an independent outside (third party) environmental audit group;
 - ! Define the scope, type, and frequency of assessments;
 - ! Develop quality assurance objectives, including appropriate levels of review;
 - ! Develop procedures for management and use of information obtained from routine reports and during audits, including analysis of results, reporting, trend analysis, and root-cause analysis;
- ! Develop procedures to convey system measurements into the review and improvement process.

GOVERNMENT PERFORMANCE AND RESULTS ACT OF 1993 (GPRA)

GPRA requires Federal agencies to provide information on their goals and how well they achieve them. Agencies will have to:

- ! develop strategic plans prior to fiscal year 1998 that describe goals and objectives, plans to meet them, necessary resources, and key external factors;
- ! develop annual plans describing fiscal year performance goals beginning in FY 1999;
- ! prepare annual reports comparing performance to goals beginning in March 2000.

Agencies can use the GPRA planning framework to include environmental goals and identify how they will be met and the resources that will be needed.

5.1.2 Institute Benchmarking

The agency institutes a formal program to compare its environmental operations with other organizations and management standards, where appropriate.

"Benchmarking" is a term often used for the comparison of one organization against others, particularly those that are considered to be operating at the highest level. The purpose of

Benchmarking is twofold: first, the organization is able to see how it compares with those whose performance it wishes to emulate; second, it allows the organization to benefit from the experience of the peak-performers, whether it be in process or managerial practices. The higher-performing organization also benefits by passing along innovations or efficiencies, which will enhance its reputation among its peers. It may

FEDERAL AGENCY BENCHMARK REPORT

EPA surveyed 17 civilian federal agencies (CFA), 4 defense related agencies (DRA), and 3 corporations (Chevron, Xerox, and 3M) to evaluate their approaches to six Benchmark Elements:

- ! Organizational Structure;
- ! Management Commitment;
- ! Implementation;
- ! Information Collection/Management/Follow-up;
- ! Internal and External Communication;
- ! Personnel.

EPA selected a total of 31 Key Indicators as representative of the six Elements. While 50 percent or more of the DRAs responded positively to all Key Indicators, CFAs did so for fewer than half the Indicators. Rarely did more than 10 of the 17 CFAs respond positively to an Indicator. Corporate responses fell much closer to the DRAs.

Source: "Environmental Management System Benchmark Report: A Review of Federal Agencies and Selected Private Corporations," EPA-300R-94-009, December 1994

also obtain more tangible benefits, such as innovative technological approaches. Benchmarking also serves an overall good by fostering a spirit of cooperation, rather than competition and secrecy. The Malcolm Baldrige National Quality Award, for example, requires its winners to share their strategies with other organizations seeking improvements.

Benchmarking offers an attractive path to improvement of performance through adoption of practices already proven to be effective. However, reliance on such comparisons can be more harmful than beneficial in certain circumstances. Too often, organizations fail to focus their efforts appropriately and attempt to adopt practices that simply do not fit. The practice of Benchmarking, rather than the improper approach to it, is then blamed for the poor result and abandoned.

BENCHMARKING TIPS

1. Tie efforts to strategic objectives;
2. Keep teams of manageable size (e.g., 6 to 8);
3. Involve those most affected;
4. Avoid focusing on overly broad issues;
5. Set realistic timetables;
6. Pick benchmarking partners carefully;
7. Follow benchmarking protocol;
8. Focus the data collection process;
9. Focus on process, not on numbers;
10. Identify future recipient of information.

During 1993-94, EPA surveyed 21 federal agencies and three private corporations to determine whether they display behavior indicative of "best in class" environmental management systems. The elements used for the "best in class" benchmark were taken from a number of sources, including management standards. Benchmarking against established management standards, such as the ISO 14000 series or the Responsible Care program developed by the Chemical Manufacturers Association (CMA), may be useful for those agencies with more mature environmental programs, particularly if the agencies' activities are such that their counterparts in the private sector would be difficult to find. However, it should be understood that the greater benefit is likely to result from direct comparison to an organization that is a recognized environmental leader in its field.

Appropriate steps to address benchmarking could include:

- ! Evaluate the agency to identify areas in which benchmarking would be most beneficial;
- ! Begin to develop and implement a program of comparison with other organizations;
- ! Develop methods to apply results of inter-organizational comparisons and further encourage comparison with other organizations and networking through professional organizations and conferences;
- ! Explore the possibility of mentoring another public or private organization.

5.2 CONTINUOUS IMPROVEMENT

The agency implements an approach toward continuous environmental improvement that includes preventive and corrective actions as well as searching out new opportunities for programmatic improvements.

Continuous improvement is approached through the use of performance measurement to determine which organizational aspects need to have more attention or resources focused upon them. Environmental excellence should be viewed as a journey, not a destination. There are always constructive steps to be taken. The development of organizational goals should incorporate the principle of continuous improvement. The institution of a program to solicit and respond to employee suggestions is an important step in generating confidence in the organization's commitment to improvement. Public and private organizations that are generally considered by their peers and the public to be performing at the highest levels can provide incentive and insight toward implementation of improvement measures.

Continuous improvement may be demonstrated through the implementation of lessons learned and employee involvement programs that provide the opportunity to learn from past performance and incorporate constructive suggestions. In addition, the agency actively seeks comparison with and guidance from other organizations considered to be performing at the highest level.

Appropriate steps to address continuous improvement could include:

- ! Develop procedures to address the root cause of current deficiencies and prevent future deficiencies;
- ! Develop a "lessons learned" program to educate personnel;

MANAGEMENT REVIEW

An EMS needs periodic management review. This is different from the conformance review discussed earlier. Management needs to evaluate the EMS to see if it needs to be changed to meet an organization's evolving goals and needs. Of course, the implemented EMS will have to be evaluated to see if it *conforms* to the revised EMS plan.

- ! Develop and implement a program of comparison with other organizations;
- ! Develop a program to apply results of inter-organizational comparisons and continue to conduct comparisons and/or develop partnerships with other organizations, particularly those considered "best in class";
- ! Encourage suggestions for improvement from all personnel;
- ! Conduct periodic review of operating procedures;
- ! Review contemporary management philosophies to identify viable approaches;
- ! Provide a mechanism to incorporate identified improvements into the next planning cycle;
- ! Periodically review and report on improvements.

CHAPTER 8: CEMP SELF-ASSESSMENT MATRIX

The CEMP Self-Assessment Matrix is a tool to help agencies evaluate their progress in implementing the CEMP and map their next steps. The Matrix was designed to support the gradual development of an environmental program that addresses the CEMP principles, and to relate the suggested actions presented in previous chapters to the stage in the program's evolution when they are most likely to be implemented. The Matrix is also intended to support several points that are key to development of an environmental management system, including:

- ! there is a logical (but not strictly structured) progression of activities in the growth of a program; advancing to the next "higher" level builds upon the foundation of more fundamental activities at "lower" levels;
- ! integration of the system by addressing all of the principles, and maintaining that integration throughout the life of the program, is fundamental to its success;
- ! even after reaching the "highest" level, continual review and improvement is necessary to maintain that level of performance.

It will be helpful for agencies to keep in mind that they may already have a foundation of system elements that they can build upon. The results of an agency's "gap analysis" can provide a starting point for implementation of each principle.

How the CEMP Matrix Works

The CEMP Matrix is laid out to show the implementation of each principle over five levels of development. There is nothing magical about the use of five levels. The number was chosen as an intermediate point that communicates the idea of progression without overwhelming the user. Although the levels are numbered, no "scoring" scheme is implied, although agencies are free to develop such schemes if they believe it would benefit them. Similar approaches that are intended to be used as scoresheets have been developed by other organizations. For example, the Council of Great Lakes Industries (CGLI) has developed a matrix that is intended to take an organization through a "roadmap" to implement Total Quality Environmental Management. The CGLI uses the seven Malcolm Baldrige Award criteria as its categories, and ranks progress over ten levels. Like the Baldrige award itself, the seven categories are weighted to indicate their relative importance.

The Global Environmental Management Initiative has developed two slightly different approaches to environmental self-assessment. The first is based on the 16 principles found in the International Chamber of Commerce (ICC) Business Charter for Sustainable Development, which are generally applicable to any organization. Using this "Environmental Self-Assessment Program," organizations rate their performance for 71 "elements" identified under the 16 principles on a scale of 1 through 4 (or Not Applicable), with 1 corresponding to simple regulatory compliance. Each element is also assigned a weighting factor, which represents its relative importance to the scoring organization (unlike the CGLI matrix, where a category has the same weighting factor for all organizations).

The second GEMI approach is for organizations that want to measure their environmental management systems against the ISO 14001 EMS Standard. The "ISO 14001 Self-Assessment Checklist" covers a total of 31 questions under the five ISO 14001 EMS elements. By scoring each on a scale of 0 through 2, an organization should get an idea of how well its EMS conforms to the ISO 14001 Standard. The Checklist can be used to support a gap analysis or as an indicator that ISO conformance has been achieved. This exercise would be especially useful for companies that may need to explore ISO

certification (and third-party certification) for business purposes, although Federal agencies may also benefit from comparison to a recognized international standard. Agencies will also recognize that the questions in the Checklist can help them implement the CEMP.

For the CEMP Matrix, each block gives an indication of what the agency will have accomplished under a particular principle. Some of these are more concrete than others, while some may be more subjective and will require interpretation by the agency. For example, Level 3 under "Policy Development" states that the agency "develops draft policy and circulates it for review and comment," which is fairly straightforward. Level 3 under "Environmental Stewardship" states that the agency "identifies alternatives to high-impact activities," which will require agencies to determine which activities are high-impact and develop criteria for identifying alternatives.

The Matrix is offered as a potentially useful tool that gives one approach to implementing the principles, not as a rigid "one size fits all" blueprint. Agencies are encouraged to adapt the Matrix to their own programs, and to make whatever modifications they deem advisable.

Moving From Level to Level

Previous chapters have presented possible steps that could be taken by agencies implementing the CEMP. To enhance the usefulness of the Matrix, the steps are repeated here and related to the Matrix level (1 through 5) at which they might be most appropriate. Again, the Matrix is intended as a guide and therefore these actions are not required, nor is it required that they be performed in any particular order. Not all levels have actions associated with them, and many of the activities will be continuing or ongoing through the upper levels of the Matrix, rather than performed on a one time only basis. However, it will be beneficial to agencies to understand that some activities are very basic "first steps," while others are likely to require significant

groundwork in terms of program maturity if they are to be properly conducted. Some agencies may find that they are in a position to conduct some "higher-level" activities before other "lower-level" activities can be completed, or can skip some activities altogether. The important thing is for agencies to understand their own circumstances and tailor their activities appropriately.

Similarly, it is not necessary for agencies to complete the same level for all principles before moving to the next level. In fact, this would be counterproductive. An agency may well find that it has reached Level 4 for one principle before Level 1 is completed for another. It is, however, important that the various parts of the program maintain communication with each other, as is illustrated by the number of candidate actions that cover similar ground. For example, several of the principles can be partially fulfilled by implementing a system to obtain employee feedback. Even though this activity cross-cuts the principles, it does not necessarily appear at the same Matrix level for each.

Finally, the Matrix does not represent a mythical state of perfection that will be impossible for agencies to attain. Rather, it should be thought of as a means by which agencies can gauge their progress in implementing the CEMP and, more broadly, in improving their approaches to environmental

ICC CHARTER

The International Chamber of Commerce Business Charter for Sustainable Development Principles for Environmental Management cover the following areas:

1. Corporate Priority
2. Integrated Management
3. Process of Improvement
4. Employee Education
5. Prior Assessment
6. Products and Services
7. Customer Advice
8. Facilities and Operations
9. Research
10. Precautionary Approach
11. Contractors and Suppliers
12. Emergency Preparedness
13. Transfer of Technology
14. Contributing to the Common Effort
15. Openness to Concerns
16. Compliance and Reporting

management by incorporating those elements considered "state of the art." Improvements in management should be reflected by improvements in the efficiency, cost-effectiveness, and performance of environmental programs.

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 1: MANAGEMENT COMMITMENT

LEVEL	1.1 OBTAIN MANAGEMENT SUPPORT		1.2 ENVIRONMENTAL STEWARDSHIP
	Policy Development	System Integration	
<u>FINISH</u> [5	Agency communicates its policy externally, to regulatory authorities, other agencies, and other stakeholders	Agency decisions consider environmental criteria when appropriate; program thoroughly integrated ! Assume leadership through outreach	All agency decisions include appropriate environmental criteria to minimize impact ! Consider environmental impacts ! Participate in hearings and other activities
[4	Agency develops final policy and communicates it internally	Over 50% of agency decisions consider environmental criteria; program integrated through 75% of agency ! Encourage teaming across divisions	Agency develops procedures to evaluate environmental impacts of future activities ! Introduce LCA and design for environment concepts ! Provide outside speakers ! Sponsor outside activities ! "Open House" for community ! Demonstrate commitment
[3	Agency develops draft policy and circulates it for review and comment	Environmental criteria are incorporated into employee performance standards as appropriate; program integrated through 50% of agency; criteria for environmental decision-making developed ! Review responsibilities	Agency identifies alternatives to high-impact activities ! Encourage environmental action plans ! Provide "brown bag" speakers ! Create promotional items

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 2: COMPLIANCE ASSURANCE AND POLLUTION PREVENTION

LEVEL	2.1 COMPLIANCE ASSURANCE	2.2 EMERGENCY PREPAREDNESS	2.3 POLLUTION PREVENTION AND RESOURCE CONSERVATION
FINISH [5	<p>Full agency compliance is sustainable; contractors are included within the compliance program</p> <ul style="list-style-type: none"> ! Set "beyond compliance" performance goals ! Evaluate contractor performance ! Introduce risk assessment 	<p>All agency personnel are trained in emergency response procedures; full-scale exercises are conducted at least annually</p>	<p>Program maintained throughout the agency; significant reductions in waste generation achieved</p>
[4	<p>Agency develops proactive and cooperative relations with regulators; non-compliance situations reduced significantly</p> <ul style="list-style-type: none"> ! Employee reporting encouraged ! Regular contact with regulators ! Procedures to elevate issues to upper management ! Pollution prevention is primary management approach 	<p>Agency implements medical monitoring for environmental program personnel as appropriate and inspects facilities periodically</p> <ul style="list-style-type: none"> ! In-house medical monitoring, where appropriate 	<p>Agency encourages reduced use of resources and identifies individuals contributing to the success of the program; process improvements implemented</p> <ul style="list-style-type: none"> ! Affirmative procurement program ! Life-cycle analysis performed ! Design for environment ! Product stewardship

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 3: ENABLING SYSTEMS

LEVEL	3.1 TRAINING	3.2 STRUCTURAL SUPPORTS	3.3 INFORMATION MANAGEMENT, COMMUNICATION, DOCUMENTATION
FINISH [5	100% of agency fully trained, refresher training provided, computer-based and distance learning employed when appropriate; training program continually evaluated ! Obtain feedback on training ! Investigate alternative training methods	Procedures are fully implemented and reviewed periodically ! Conduct periodic review of procedures to ensure currency	Agency maintains effective communications, applies environmental information to decision-making, and maintains thorough records ! Use EMS data in decision-making
[4	75% of agency fully trained; refresher training developed and available, where appropriate; continuing education encouraged ! Establish refresher training ! Encourage continuing education	Agency implements procedures and begins training of all staff, as appropriate ! Pursue integration of environmental program throughout agency	Agency develops procedures for use of information, provides avenues for employee input, and has a well-maintained records center ! Use electronic networks ! Assure validity of envtl. data ! Secure data-handling procedures ! Employee reporting system ! Encourage employee input

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 4: PERFORMANCE AND ACCOUNTABILITY

LEVEL	4.1 RESPONSIBILITY, AUTHORITY AND ACCOUNTABILITY	4.2 EMPLOYEE PERFORMANCE STANDARDS
FINISH [5	Assignment of environmental responsibilities is reviewed periodically in light of performance	Agency develops a program to recognize and reward personnel that carry out environmental responsibilities exceptionally well; appropriate disciplinary mechanisms also in place ! Prepare program to reward or recognize honorees ! Prepare disciplinary mechanisms to address non-conformance with agency policy or procedures
[4	Personnel are provided avenues to provide input and employees are held accountable for environmental performance ! Develop employee input/concerns program	Personnel are evaluated based on environmental aspects of their performance standards ! Develop procedures for evaluating performance
[3	All employees assigned environmental responsibilities are given appropriate authority and training ! Issue clear statements of environmental responsibility ! Prepare process to address authority conflict ! Develop policy on accountability	Affected employees have environmental responsibilities clearly stated in performance standards
[2	Managers assigned environmental responsibilities are given training and authority to meet those responsibilities ! Issue statements defining authority	Managers have environmental responsibilities clearly stated in performance standards ! Develop employee evaluation standards ! Publicize standards and solicit input from agency

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 5: MEASUREMENT AND IMPROVEMENT

LEVEL	5.1 EVALUATE PERFORMANCE		5.2 CONTINUOUS IMPROVEMENT
	Gather/Analyze Data	Institute Benchmarking	
FINISH [5	Data-gathering is a continuous process; gaps in performance are identified and analyses conducted to identify their root cause(s)	Agency maintains ongoing "benchmarking cycles"; agency becomes a target for benchmarking by others ! Explore possibility of mentoring other organizations	Agency shows significant improvement in addressing substandard performance situations and aggressively seeks to compare its performance to others ! Review other management approaches for applicability
[4	Periodic evaluations of operations and data-gathering procedures are conducted to assess performance ! Include system measurement in review and improvement process	Agency identifies and implements improvements based on evaluation of other organization ! Develop methods to apply results of benchmarking and pursue further involvement	Agency fully implements periodic reviews of systems and performance and seeks out additional opportunities for improvement ! Develop methods to apply results of benchmarking and pursue further involvement ! Conduct review of procedures ! Review and report improvements

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 5: MEASUREMENT AND IMPROVEMENT

[3	<p>Data-gathering and processing procedures are implemented throughout the agency</p> <ul style="list-style-type: none"> ! Identify independent audit group ! Develop procedures to manage and use information from audits 	<p>Agency evaluates performance of target organization through sharing of information (e.g., site visit) for comparison with its own</p>	<p>Agency implements employee-involvement measures, such as newsletters and lessons learned, to solicit input on improving performance</p> <ul style="list-style-type: none"> ! Develop lessons learned program ! Encourage employee suggestions ! Work to include improvements in next planning cycle
[2	<p>Agency develops procedures for gathering appropriate data and communicates them to management</p> <ul style="list-style-type: none"> ! Define assessment parameters ! Develop QA objectives 	<p>Agency identifies other organizations with similar activities and/or exceptional performance and initiates contact with them</p> <ul style="list-style-type: none"> ! Develop program of comparison to other organizations 	<p>Agency develops procedures to address preventive and corrective action situations and communicates them to management</p> <ul style="list-style-type: none"> ! Develop procedures to identify root causes ! Develop program of comparison to other organizations
1 [START	<p>Agency identifies performance indicators, data needs, and standards of comparison</p> <ul style="list-style-type: none"> ! Develop and report on performance indicators ! Develop internal audit program 	<p>Agency evaluates its activities and sets goals for environmental performance</p> <ul style="list-style-type: none"> ! Evaluate most useful benchmarking areas 	<p>Agency evaluates performance to identify areas needing improvement</p>

Notes:

1 [START	Agency identifies personnel with responsibility for environmental performance ! Assign authority to ensure environmental compliance	Agency identifies personnel with responsibility for environmental performance ! Identify organizational performance goals
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Notes:

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 3: ENABLING SYSTEMS

[3	<p>50% of agency fully trained; system to track fulfillment of training requirements developed and implemented</p> <ul style="list-style-type: none"> ! Establish in-house group to track training program 	<p>Agency disseminates procedures throughout to raise awareness of issues; implementing staff is trained</p> <ul style="list-style-type: none"> ! Encourage input from personnel 	<p>Agency communicates with regulators and stakeholders and develops information gathering, manipulation, and management procedures</p> <ul style="list-style-type: none"> ! Evaluate new IM projects ! Assign POC for new projects ! Establish Resource Center ! Provide regular status updates ! Communicate with other orgs. ! Develop public outreach program ! Communicate with stakeholders ! Develop distribution network ! QA and security procedures
[2	<p>Agency training group identifies available outside training and develops in-house training where necessary; 20% of agency fully trained</p> <ul style="list-style-type: none"> ! Identify job-specific requirements ! Evaluate outside vs. in-house training ! Train the trainers as necessary 	<p>Agency develops or revises procedures to address activities identified as having environmental aspects</p> <ul style="list-style-type: none"> ! Eliminate or revise procedures found to be barriers 	<p>Agency develops internal communications and information management infrastructure, and document control procedures</p> <ul style="list-style-type: none"> ! Ensure compatibility ! Develop envtl. IM procedures ! Identify key records/documents ! Develop in-house communication ! Enable working relationships ! Report completion procedures ! Maintain MSDS, etc.

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 3: ENABLING SYSTEMS

1 [START	Agency training group identifies environmental training needs and where training is available ! Develop "Core Curriculum"	Agency identifies and evaluates existing procedures and activities that have environmental aspects ! Review agency documentation	Agency identifies lines of communication, information needs, documentation procedures ! Assign managerial responsibility ! Create in-house IM group ! Review current capabilities ! Define lines of communication ! Assign environmental POCs ! Develop centralized filing system
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Notes:

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 2: COMPLIANCE ASSURANCE AND POLLUTION PREVENTION

[3	<p>Agency fully implements compliance program, develops a program to track relevant legislation and regulations, and sees improved performance</p> <ul style="list-style-type: none"> ! Track regulatory initiatives ! Address non-compliance conditions ! Track corrective action progress ! Environmental recordkeeping system ! Identify problems and prevent non-compliance incidents ! Establish compliance management system that is integrated with EMS 	<p>Agency emergency response teams are trained and periodic drills are conducted</p> <ul style="list-style-type: none"> ! Emergency Response Team ! Training for Emergency Response Team and other personnel ! Conduct regular exercises ! Identify emergency resources 	<p>Agency develops goals, implements employee suggestion procedures, and identifies alternatives to major generators</p> <ul style="list-style-type: none"> ! Toxic materials reductions ! Water conservation program ! "Repair or Replace" program
[2	<p>Agency communicates with regulatory authorities, develops procedures to address compliance situations, and distributes them throughout the agency</p> <ul style="list-style-type: none"> ! Introduce compliance group ! Develop compliance guidance ! Coordinate with regulators ! Communicate information on regulations and permits 	<p>Agency develops procedures to address emergency response, distributes them throughout the agency</p> <ul style="list-style-type: none"> ! Develop response procedures ! Disaster preparedness plan ! Hazard mitigation measures ! Preventive maintenance program ! Coordinate with authorities ! Develop communication plan 	<p>Agency communicates pollution prevention commitment to all personnel and begins recycling programs (paper, aluminum, glass)</p> <ul style="list-style-type: none"> ! Energy conservation program ! Recycling program in place ! Encourage reuse of materials

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 2: COMPLIANCE ASSURANCE AND POLLUTION PREVENTION

1 [START	Agency compliance group evaluates agency's activities and compliance history ! Develop compliance group ! Review agency activities ! Assess compliance baseline	Agency emergency response group evaluates its activities and vulnerability to natural disaster and accidents ! Identify hazards from agency activities and facilities	Agency evaluates its waste generation profile and identifies major points of generation ! Pollution prevention program that emphasizes source reduction
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Notes:

CEMP SELF-ASSESSMENT MATRIX

PRINCIPLE 1: MANAGEMENT COMMITMENT

<p>[2</p>	<p>Agency evaluates environmental concerns of key stakeholders</p> <ul style="list-style-type: none"> ! Develop goals and priorities ! Communicate with stakeholders 	<p>Environmental criteria are incorporated into affected managerial performance standards; program integrated through 25% of agency, starting with activities most affected</p> <ul style="list-style-type: none"> ! Conduct organizational review ! Assign management responsibilities ! Include performance criteria ! Coordinate and review budget 	<p>Agency implements awareness programs to inform employees and stakeholders</p> <ul style="list-style-type: none"> ! Provide orientation
<p>1 [START</p>	<p>Agency evaluates its mission in environmental terms</p> <ul style="list-style-type: none"> ! Prepare Mission/Vision statements 	<p>Environmental program is communicated throughout agency; environmental groups established and their missions defined and communicated</p> <ul style="list-style-type: none"> ! Identify liabilities and risks ! Provide awareness training 	<p>Agency evaluates environmental impacts of its activities</p>

Notes:

Appendix 1: Agency Responses

Central Intelligence Agency (CIA)
Department of Agriculture (USDA)
Department of Commerce (DoC)
Department of Energy (DoE)
Department of Interior (DoI)
Department of Justice (DoJ)
Department of Transportation (DoTransp.)
Department of Treasury (DoTreas.)
Environmental Protection Agency (EPA)
General Services Administration (GSA)
Health and Human Services (HHS)
National Aeronautics and Space Administration (NASA)
Postal Service
Tennessee Valley Authority (TVA)
US Department of Defense
Veterans Administration (VA)

Central Intelligence Agency



Washington, D.C. 20505

9 October 1996

Mr. Steven A. Herman
Assistant Administrator
Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Herman:

In response to your letter dated, 3 September 1996, the Central Intelligence Agency (CIA) is pleased to demonstrate its participation with the federal government Code of Environmental Management Principles (CEMP). The following is a brief description of the comprehensive CIA program and the implementation of the CEMP fundamental elements.

1. Management Commitment: In FY92, the Executive Director, in coordination with the Deputy Director for Administration (DDA), established a formal environmental program to gain compliance with environmental regulations and initiate remediation of potential cleanup sites. Funding for the multi-year program was identified by the Comptroller commencing with the FY94 budget. Administration of the program was assigned to the newly formed Environmental Safety Group (ESG) within the Office of Medical Services, Directorate of Administration. ESG is responsible for centralized program management which includes planning, funding, staffing, and program oversight. Individual Agency field sites are staffed with an Environmental Specialist on assignment from ESG. These Environmental Safety Officers (ESOs) are responsible for implementation of the program and remediation of identified deficiencies. Concurrently, the Agency established an environmental compliance regulation requiring all components and personnel to comply with environmental laws and regulations, executive orders, and internal Agency requirements. The DDA, who serves as the Agency Environmental Executive, issued a policy statement which makes individual Agency components accountable for any fines or penalties issued by federal or state regulators. In March 1995, the DDA also issued an Agency Notice establishing the CIA Pollution Prevention Policy and Goals. These goals are a fifty percent reduction in the use of toxic chemicals and a reduction in the use of extremely hazardous substances.

2. Compliance Assurance and Pollution Prevention: The CIA has established a proactive program at all Agency sites to assure compliance with environmental laws and regulations. This consists of annual compliance inspections of all Agency sites by ESG

Mr. Steven A. Herman

environmental specialists. In addition, compliance audits have been performed at some Agency sites by environmental consultants, U.S. Army and U.S. Navy environmental audit teams, and other governmental agencies such as the National Security Agency. ESG specialists provide expert consultation and assistance to field sites to address specific issues or to provide surge support during periods of increased workload.

The CIA has also implemented a proactive pollution prevention program. As previously stated, the goal of this program is to achieve a fifty percent reduction in the use of toxic chemicals and to reduce the use of extremely hazardous substances. To date, the pollution prevention program reduced the Agency's inventory of toxic chemicals by thirty-eight percent and is well on the way to attaining the fifty percent five-year goal. Source reduction is the primary strategy in this effort with recycling as a secondary approach. Each site has submitted a pollution prevention plan which describes the methods by which they will meet the corporate pollution prevention goals. An officer in ESG has been designated as the Pollution Prevention Program Manager. This individual visits each of our field sites annually to provide assistance and guidance to site managers on the program. Progress on this effort is tracked annually to ensure that the December 1999 target date will be met.

3. Enabling Personnel: ESG provides funding for environmental compliance training for program specialists, site managers, and selected component personnel. A number of ESG specialists are pursuing advanced degrees in Environmental Engineering, Environmental Management, and Environmental Science to further their expertise in these fields. Senior managers are briefed on the progress of the program on a regular basis. A Lotus Notes based electronic bulletin board database provides a means to disseminate regulatory updates to field personnel, functions as an inquiry and response forum, and serves as a general discussion media for promoting environmental issues and policies.

4. Performance and Accountability: All major Agency field sites are staffed with a full time ESO who implements the environmental program under the direction of the site manager. The ESO is responsible for coordinating the environmental program among the various tenants located at the site. Performance evaluations for the ESO are prepared annually by the site manager and forwarded to the Agency environmental program office for review. The site manager and the chief of the environmental program office are mutually accountable for the performance of the

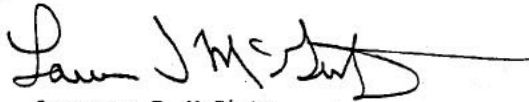
Mr. Steven A. Herman

ESO and the site program. However, as previously stated, the site manager or offending component is held accountable for any fines or penalties assessed against the site from an inspection by state or federal regulators.

5. Measurement and Improvement: Programmatic appraisals are conducted annually by ESG to assess the status of the Agency environmental program. In addition, the Agency Inspector General conducts periodic reviews of the program to ensure programmatic compliance with environmental laws and regulations. Any deficiencies that are identified by these inspections are targeted for correction. Deficiencies requiring an outlay of resources are centrally funded by ESG on a basis of priority. Annual environmental conferences are held to assemble the field ESOs to review the status of site programs as well as the Agency program. Progress on pollution prevention, affirmative procurement, waste reduction, and recycling goals are reviewed and discussed. Additional pollution prevention opportunities are identified and targeted.

Should you require any additional information on the CIA's implementation of the CEMP, please contact Mr. Randy Hyde, Pollution Prevention Program Manager on (703)482-6081.

Sincerely,



Lawrence J. McGinty
Chief, Environmental Safety Group



UNITED STATES DEPARTMENT OF COMMERCE
Office of the Secretary
Washington, D.C. 20230

SEP 26 1996

Mr. Steven A. Herman
Assistant Administrator
Office of Enforcement and
Compliance Assurance
Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Herman:

In response to your letter dated September 3, 1996, the U.S. Department of Commerce is pleased to express its support for the Code of Environmental Management Principles (CEMP) for Federal Agencies. The Department is committed to improving its environmental performance by developing and enhancing policies and programs for pollution prevention and compliance with the best environmental practices.

The Department has in place an effective policy and statement of responsibilities for environmental compliance and has developed a network of key environmental managers at the operating unit level. These officials and their staff ensure that facilities that store hazardous materials continue to make progress in developing and implementing effective pollution prevention plans.

We look forward to continuing our work with the Environmental Protection Agency (EPA) and the Interagency Pollution Prevention Task Force (IPPTF) in our efforts to ensure that the CEMP is fully realized in the Department of Commerce and throughout the Federal government.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Hunker".

Jeffrey Hunker
Deputy Assistant Secretary



Department of Energy
Washington, DC 20585

OCT 21 1996

Mr. Steven A. Herman
Assistant Administrator
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Herman:

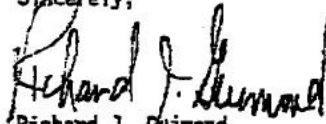
Thank you for your letter of September 3, 1996, requesting the Department's support for the Code of Environmental Management Principles (CEMP). Protecting and restoring the environment is a central mission for the Department of Energy (DOE). The five principles of this Code are consistent with our continuing efforts to improve the quality, cost-effectiveness, and integration of our environmental operations. We therefore endorse the CEMP on an agency basis.

Implementing the CEMP across DOE will require a range of strategies. DOE operates numerous facilities that vary widely in terms of mission, size, and environmental condition. For this reason, no single solution can be effective in implementing the CEMP Department-wide. We plan to incorporate principles of the CEMP into the implementation of an Integrated Safety Management System at DOE facilities. This approach to integrating the protection of workers, the public, and the environment has been developed in response to a recommendation by the Defense Nuclear Facilities Safety Board and is in the first phase of implementation. In the near term, we plan to provide guidance to our sites for preparation of their updated pollution prevention plans; we will attach the CEMP and encourage its use in all site environmental management planning. The elements of the CEMP are also being incorporated into comprehensive plans which the Department is currently developing to guide land and facility use decisions. These decisions will be based on the principles of ecosystem management and sustainable development.

Implementing the CEMP via the Integrated Safety Management System, comprehensive plans, and pollution prevention plans is also consistent with use of the ISO 14001 Standard, *Environmental Management System Specification*. Several sites are currently using or adopting environmental management systems consistent with the ISO Standard. This approach is being voluntarily implemented at several sites, is under consideration at others, and was included as a

performance incentive in the recent Hanford contract. We look forward to meeting the challenge of implementing the Code of Environmental Management Principles as an important requirement of Executive Order 12856.

Sincerely,



Richard J. Guimond
Assistant Surgeon General, USPHS
Principal Deputy Assistant Secretary
for Environmental Management
Environmental Executive



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240

SEP 30 1996

Mr. Jim Edward
Director
FFEO Planning, Prevention and Compliance
U.S. Environmental Protection Agency
401 M Street, S.W. (2261A)
Washington, D.C. 20460

Dear Mr. Edward:

This is in response to your memorandum of September 3, 1996, and addressed to Deputy Secretary of the Interior John R. Garamendi concerning the Code of Environmental Management Principles (CEMP) for Federal Agencies. The Department of the Interior (DOI) fully supports the intent of CEMP and has already implemented provisions consistent with both CEMP and Executive Order 12856.

The Office of Environmental Policy and Compliance (PEP) has issued the "DOI General Guidance on Pollution Prevention, Right-to-Know, Recycling, and Green Acquisition" and developed 26 "Fact Sheets" on pollution prevention activities (e.g., vehicle maintenance).

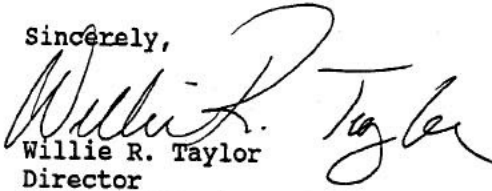
The PEP developed overall Departmental policy (518 DM 1) on comprehensive waste management which prescribes responsibilities and functions regarding management of wastes on Departmental lands and facilities through improved awareness, program management, and accountability. Also, another Departmental policy (518 DM 2) was developed concerning compliance with Federal, State, interstate, and local waste management requirements.

The PEP issued a "Solid Waste and Hazardous Materials Management Compliance Handbook" for use by Departmental bureaus and offices. Also, PEP has established an annual and competitive Environmental Achievement Award which recognizes Departmental bureaus and offices, employees, and contractors for their exceptional achievements or contributions in pollution prevention, waste reduction, recycling, and acquisition of environmentally-preferred products. Finally, Mr. Brent Giezantner, a refuge manager for the Fish and Wildlife Service, was a recipient of the Closing the Circle Award in 1995 for environmental protection and pollution prevention activities at the Aransas National Wildlife Refuge in Austwell, Texas.

We are presently working on the development of a Departmental policy for environmental auditing which will incorporate elements of both EPA's Generic Environmental Auditing Protocol and the ISO 14000 standard series.

Again, DOI supports the intent of the CEMP and would appreciate EPA's efforts to facilitate implementation of CEMP government-wide, particularly at the field level. If you have any questions, please contact Jim Ortiz, of my office, at (202) 208-7553.

Sincerely,

A handwritten signature in cursive script that reads "Willie R. Taylor". The signature is written in dark ink and is positioned above the printed name and title.

Willie R. Taylor
Director

Office of Environmental Policy
and Compliance



U.S. Department of Justice

Washington, D.C. 20530

NOV 13 1996

Mr. Steven A. Herman
Assistant Administrator for Enforcement
Compliance Assurance
Environmental Protection Agency
Room 3204, Ariel Rios Federal Building
1200 Pennsylvania Avenue, NW
Washington, DC 20044

Dear Mr. Herman:

Lois J. Schiffer, Assistant Attorney General, Environment and Natural Resources Division, referred your recent letter to her concerning the Code of Environmental Management Principles (CEMP) to my office for action. AS the Assistant Attorney General for Administration, responsibility for the Department's internal environmental management program falls under my general responsibilities.

We, of course, endorse the concepts and objectives embodied in the CEMP for Federal agencies. As your letter recognizes, some of our components have already implemented internal systems and approaches to address their environmental responsibilities. Therefore, we appreciate the flexibility identified in your letter and intend to encourage our components to move toward the implementation of the CEMP principles in a manner which is most appropriate for their needs.

Almost two years ago, I made a commitment to strengthen the Department's environmental program by assigning additional staff and resources. I also gave the program greater visibility by elevating it organizationally to report directly to a Deputy Assistant Attorney General for Administration. The newly designated Department of Justice (DOJ) Environmental Executive regularly participates in my executive staff meetings which provide him the opportunity to bring environmental program concerns to my immediate attention.

During the past year, we sponsored several briefings on environmental and energy conservation topics for Departmental program managers and administrative staff. These included briefings by representatives from the Environmental Protection

Mr. Steven A. Herman

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Agency (EPA) on the Green Lights Program and the Energy Star Program. At our request, Fran McPoland, the Federal Environmental Executive, arranged briefings for Departmental program managers on recycled vehicular products and the use of copier paper with post consumer content. We have successfully supported the efforts of several of our bureaus to obtain funding to address significant, long-standing environmental issues. The Drug Enforcement Administration has embarked on a \$21 million dollar multi-year program to replace four of its regional laboratories that have outmoded environmental systems. The Immigration and Naturalization Service has initiated a five-year, \$21.5 million dollar, nationwide project to replace leaking underground fuel storage tanks. Other components in the Department are addressing environmental concerns associated with lead hazards in indoor firing ranges, as well as, lead-based paint in residential housing.

Next spring we will start a seven-year, \$150 million dollar, renovation of the Main Justice Building which will include the installation of state-of-the-art energy efficient HVAC equipment, insulated window glazing, and high efficiency electrical and water system equipment. Our Bureau of Prisons (BOP) has been a strong supporter of enhanced environmental, pollution reducing, and energy conserving programs. BOP has instituted a program of environmental self-audits and expects to have completed six such audits by the end of this fiscal year. BOP also instituted a comprehensive environmental recycling program for core items at its institutions. This project was identified for recognition in FY 96 and was submitted for consideration under the second annual White House Closing the Circle Awards. Recently, BOP entered into its first renewable energy savings contract for an innovative project in its Phoenix, Arizona Federal Correctional Institution. The contract provides for pre-heating domestic hot water using solar energy as the renewable energy source and has long-range energy savings potential.

These projects are cited as examples which reflect awareness of our environmental responsibilities and our support of the environmental challenge program. During the remainder of this fiscal year, the Department will continue its efforts to provide leadership, direction and support to its components' programs. Our thrust will be to establish a more systematic basis for insuring compliance and accountability. We recently hosted a briefing by Don Franklin of your office on EPA's FEDPLAN-PC information management system which was attended by representatives from all DOJ components. Components are now evaluating their reporting responsibilities under FEDPLAN-PC and will determine if they will use this system for tracking nonreportable environmental projects. In following-up on this briefing, we asked each component to identify active, planned, or

Mr. Steven A. Herman

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anticipated environmental projects. Once this information is reported, the Department will have a basis to provide oversight and assistance for the environmental projects underway or planned throughout the Department.

In addition, we have recently drafted our first proposed Departmental policy guidance document on pollution prevention, control and energy conservation. When issued, it will serve as basic program guidance for all Departmental components and incorporate the essential elements of the CEMP. As we mentioned earlier, our bureaus with significant environmental issues have already implemented some type of environmental management system to track compliance, accountability, and progress at their facilities. In promulgating our guidance, we will share information with all of our components about the environmental management system standards described in the enclosure to your letter and urge them to evaluate them and consider adopting one if it appears to be beneficial.

If you have any questions regarding our response, your staff may contact Warren Oser, Department of Justice Environmental Executive, on 202-514-0458.

Sincerely,


Stephen R. Colgate
Assistant Attorney General
for Administration

cc: Lois J. Schiffer



U.S. Department of
Transportation

Assistant Secretary
for Administration

400 Seventh St., S.W.
Washington, D.C. 20590

October 30, 1996

Mr. Steven A. Herman
Assistant Administrator
Federal Facilities Enforcement Office
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Herman:

Thank you for your letter regarding the *Code of Environmental Management Principles for Federal Agencies (CEMP)*. The Department of Transportation is committed to quality environmental program management and agrees with the spirit and intent of the CEMP.

We already have initiatives which address many of the CEMP principles and we are making significant efforts toward the goal of improving our existing environmental management systems. As we progress, the principles will be a valuable internal benchmarking tool. We intend to support these principles to the maximum extent feasible given our existing resources and current budget constraints.

If you have any questions regarding this comment please call Christina Barrett of my staff on 202-366-0038.

Sincerely,

Melissa J. Spillenkothen

Melissa J. Spillenkothen



DEPARTMENT OF THE TREASURY
WASHINGTON, D.C.

December 10, 1996

Mr. Steven A. Herman
Assistant Administrator for
Enforcement and Compliance Assurance
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Dear Mr. Herman:

Thank you for your letter regarding the *Code of Environmental Management Principles for Federal Agencies (CEMP)*. The Department of the Treasury fully supports the goals of the CEMP process, and we look forward to continuing to work with the Interagency Pollution Prevention Task Force on its implementation.

We have taken a number of initiatives, over the last few years, toward improving the environmental management program here at Treasury. All bureaus are required to conduct environmental surveys to determine their compliance status. Pollution Prevention strategies and plans have been developed for our facilities.

CEMP provides a valuable plan for future activities. We are also examining the potential for implementation of the ISO 14001 Environmental Standard at our facilities. We are moving forward with these programs to the maximum extent that our existing resource levels permit.

If you have any questions, please call me at (202) 622-0043.

Sincerely,

A handwritten signature in cursive script that reads "Bill McGovern".

Bill McGovern
Environment and Energy
Programs Officer



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

NOV 8 1996

OFFICE OF
ADMINISTRATIVE
AND RESOURCE
MANAGEMENT

MEMORANDUM

SUBJECT: Commitment to the Code of Environmental Management Principles

FROM: *for* Alvin M. Pesachowitz
Acting Assistant Administrator

David J. O'Connell

TO: Steven A. Herman, Assistant Administrator
Office of Enforcement and Compliance

This memorandum responds to your request concerning the Agency's plans to implement the Code of Environmental Management Principles for Federal Agencies, announced in the October 16, 1996 Federal Register. As EPA's Designated Official for Safety, Health and Environmental Management, I can assure you that EPA is committed to adopting the Code and incorporating its principles throughout the Agency. I have coordinated this response with James S. Mathews, Office of Solid Waste and Emergency Response (5101), who serves as the Agency's Environmental Executive, and will coordinate the implementation of these principles with him.

By implementing these principles throughout EPA, the Agency's internal environmental management practices will be significantly improved. We have documented, through our extensive audits and program reviews, that the level of compliance is directly related to the quality of environmental management systems and visible management commitment.

Although we have integrated several of these environmental management principles into the Agency's Safety, Health and Environmental Management (SHEM) Program, we think we do better. We have updated many of our program documents and issued memorandums from Deputy Administrator and myself to enhance the understanding of these responsibilities by senior managers. We want to ensure the Agency's business is conducted in a manner that protects the environment and its employees from harm. We have developed Pollution Prevention Plans for each of EPA's facilities and are trying to integrate waste reduction into the work ethic and culture of EPA employees. We are using technology-based job tools to improve program delivery, to help our environmental officials, and to reduce program operating costs. We measure the Agency's environmental performance through internal technical audits and program reviews.



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If your staff has the time, we would appreciate your Office's review of both the quality and the scope of our program, and would appreciate your ideas for assessing customer satisfaction.

I have asked Julius C. Jimeno, Director, Safety, Health and Environmental Management Division, to meet with Craig Hooks and discuss how we might "bench mark" the Agency's efforts and incorporate more aspects of the environmental management principles into our SHEM Program.

cc: John C. Chamberlin
Julius C. Jimeno
James H. Mathews



**Deputy Administrator
General Services Administration
Washington, DC 20405**

December 2, 1996

Mr. Steven A. Herman
Assistant Administrator
Office of Enforcement and Compliance Assurance
Environmental Protection Agency
Washington, DC 20460

Dear Mr. Herman:

Thank you for your letter of September 3, 1996, requesting a brief statement declaring the General Services Administration's (GSA's) support for the Code of Environmental Principles (CEMP). You also requested a concise explanation of how GSA plans to implement the CEMP at the facility level.

GSA fully endorses the principles of the CEMP. Our agency currently has an environmental management plan and will use it to implement the CEMP at the facility level. GSA's current environmental management plan includes:

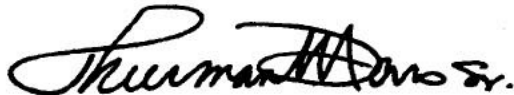
- 1) designation of a Senior Executive to serve as GSA's Environmental Executive empowered to cut across organizational lines, facilitate the development of agency-wide goals, and report directly to the Deputy Administrator on environmental matters;
- 2) formation of an agency-wide Environmental Program Council (EPC) composed of representatives from all GSA service and staff offices to assist GSA Environmental Executive in the development of agency-wide goals and review the status and achievement levels for all GSA environmental programs;
- 3) the GSA Pollution Prevention Strategy of August 1994. The strategy lays out GSA's pollution prevention goals, identifies the pollution prevention activities in which GSA currently engages, and lists GSA's pollution prevention innovative technologies that exceed the requirements of E.O. 12856;
- 4) development of sample guidelines for a facility pollution prevention plan that provides detailed information on how a facility can help reduce the use and storage of toxic chemicals 50 percent by 1999;

5) designation of environmental and recycling program coordinators at GSA regional office level to implement and monitor their respective programs at all GSA regional offices, field offices, and all other GSA-owned and -operated Federal buildings; and

6) preparation of quarterly and annual reports on the status and accomplishments of all existing GSA environmental programs.

My staff and I look forward to working with you to make the Federal Government a leader in pollution prevention. The CEMP is certainly a positive step toward meeting this important goal.

Sincerely,



Thurman M. Davis, Sr.
Deputy Administrator



DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of the Secretary

Washington, D.C.

SEP 27 1996


Steven A. Herman
Assistant Administrator
U.S. Environmental Protection Agency
Office of Enforcement and Compliance
401 M Street, SW
Washington, D.C. 20460

Dear Mr. Herman:

This letter responds to your September 3, 1996 request for a brief statement from the Department of Health and Human Services supporting the Code of Environmental Management Principles (CEMP).

The Department of Health and Human Services (HHS) strongly supports and is committed to CEMP. To implement CEMP at our facilities, HHS will include CEMP principles in the HHS General Administration Manual on Environmental Protection and in the future, HHS plans on initiating an "Environmental Protection Newsletter" to assist us in educating employees at our facilities to develop a more proactive and integrated approach to environmental protection/pollution prevention.

If you need additional information, please contact Dick Green (202) 619-1994.


Terrence J. Tychan, HHS
Environmental Executive

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001



JE

SEP 30 1996

Mr. Steven A. Herman
Assistant Administrator
Office of Enforcement and Compliance Assurance
U. S. Environmental Protection Agency
Washington, DC 20460

Dear Mr. Herman:

The National Aeronautics and Space Administration (NASA) has already embraced the principles put forth in the Code of Environmental Management Principles (CEMP) and fully endorses them on an Agencywide basis. The *NASA Strategic Plan* recognizes our responsibility to preserve the environment as one of the four strategic outcome activities contributing significantly to the achievement of the Nation's science and technology goals and priorities.

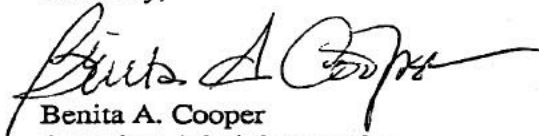
Additionally, the *NASA Environmental Excellence for the Twenty-First Century* states:

"Environmental Excellence is not a program, nor can it be achieved through a policy statement. Environmental excellence is a way of life and must be ingrained as part of our culture", and, "Our Agencywide impact on the global environment must be able to withstand the scrutiny of the international community. No one person can do this alone, but working together, the entire NASA community-civil service contractor alike-can make the vision a reality."

One of the avenues NASA is investigating to fully implement CEMP principles at the facility level is the ISO 14001 process. Currently, we are forming a working group that will analyze ISO 14001 requirements and make recommendations on implementing the standard. Several organizations have been identified that can provide the necessary training and education to facilitate this process. A number of NASA Centers have already begun incorporating ISO 4001 standards into their policy documents.

Please be assured that NASA fully endorses the CEMP principles and has already incorporated them into our environmental policy and goals. Our focus now is to fully implement those principles throughout the Agency. If you have any questions regarding this effort, please contact Ms. Olga Dominguez at 202-358-0230.

Sincerely,



Benita A. Cooper
Associate Administrator for
Management Systems and Facilities

cc:

JE/Ms. Dominguez
ARC/223-1/Ms. Olliges
DFRC/D-44809B/Mr. Ambrose
GSFC/205.0/Mr. McNeil
JPL/301-420/Mr. Buri
JSC/JJ12/Mr. Hickens
KSC/DE-EMO/Mr. Wright
LaRC/429/Mr. Lee
LeRC/3065/Mr. McCallum
MSFC/AE01/Ms. McCaleb
MAF/SA39/Mr. Celino
SSC/GA00/Mr. Magee
WSTF/RA/Mr. Amidei
WFF/205/Mr. Potterton



September 30, 1996

Mr. Steven A. Herman
Assistant Administrator
Office of Enforcement and Compliance Assurance
U. S. Environmental Protection Agency
Washington, DC 20460

Dear Mr. Herman:

Your September 3 letter to Mr. Gerald McKiernan was forwarded to my office for response. The Postal Service supports the Code of Environmental Management Principles (CEMP). Attached is our strategy for the implementation of the CEMP. We are continuing our investigation and evaluation of ISO 14001 for its implication and applicability to our organization. Thank you for keeping us informed on the progress of your environmental ventures.

Please contact Paul Fennewald at (202) 268-6239 or me at (202) 268-6188 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Charles Bravo". The signature is stylized and cursive.

Charles E. Bravo
Manager
Environmental Management Policy

Attachment

cc: Mr. Dowling
Mr. McKiernan



**Strategy for Implementation of
Code of Environmental Management Principles (CEMP)
for Federal Agencies**

- I. **Management Commitment:** The agency makes a written top management commitment to improved environmental performance by establishing policies which emphasize pollution prevention and the need to ensure compliance with environmental requirements.

*The United States Postal Service (USPS) has a **Policy for Environmental Protection** which is signed by the Postmaster General. The policy commits the Postal Service to provide employees and customers with a safe and healthy environment and promotes seven "Guiding Principles" that promote Environmental Protection as a responsible thing to do, and as a sound business practice.*

*(See Attachment I - **Policy for Environmental Protection**)*

The USPS environmental function was placed in the operations and facilities portion of the organization and the environmental responsibility was placed on line management with environmental personnel providing technical guidance and assistance to the field in implementing environmental policies and procedures.

- II. **Compliance Assurance and Pollution Prevention:** The agency implements proactive programs that aggressively identify and address potential compliance problem areas and utilize pollution prevention approaches to correct deficiencies and improve environmental performance.

An Environmental Strategic Plan was developed for the period 1993 - 2000. The plan's strategies and actions were aligned with the Policy for Environmental Protection and its Guiding Principles. The plan initially contained 117 tactical actions towards the goals of achieving compliance and leadership. The tactical action plan is flexible with the ability to integrate additional tasks and target areas as needed.

*(See Attachment II - **Annual Status Report Memo, October 16, 1995**)*

- III. Enabling Systems:** The agency develops and implements the necessary measures to enable personnel to perform their functions consistent with regulatory requirements, agency environmental policies and its overall mission.

The Postal Service also provides Environmental Target Areas to its Area and District personnel to provide focus and direction for developing and implementing plans at the Area, District and Plant levels. Two major categories of environmental target areas have been identified:

- 1) **Leadership targets** which are intended to establish the USPS as a leading organization in environmental initiatives, and
- 2) **Compliance targets** which are intended to reduce liability and ensure USPS compliance with federal, state and local laws and regulations.

*(See Attachment III - **Environmental Target Areas**)*

- IV. Performance and Accountability:** The agency develops measures to address employee environmental performance and ensure full accountability of environmental functions.

In keeping with its guiding principle

"We will incorporate environmental considerations into our business planning processes"

the Postal Service continuously monitors progress and updates the Tactical Actions in its Environmental Strategic Plan to reflect many new ideas, target areas and programs.

Since Postal Service employees are accountable for environmental objectives through the Policy for Environmental Protection, it was integrated into personnel evaluations to reinforce personnel accountability.

- V. Measurement and Improvement:** The agency develops and implements a program to assess progress toward meeting its environmental goals and uses the results to improve environmental performance.

The Postal Service implementation strategy for Measurement and Improvement is based on the following Guiding Principle:

"We will measure our progress in protecting the environment."

and is defined in the USPS Environmental Strategic Plan 1993-2000:

TRACK PROGRESS

- *Define performance criteria for key target areas of environmental concern.*
- *Establish and maintain a national information system to monitor environmental performance and compliance.*
- *Establish procedures for allocating resources to and monitoring the costs of national environmental initiatives.*

The USPS utilizes a concept known as Environmental Information Services and Support (EISS) to gather, analyze and distribute data and information through the Postal Routed Network (PRN) to Postal environmental professionals and personnel throughout the United States. EISS currently consists of a bulletin board system (an environmental and safety information source module on the Customer Service Bulletin Board System (CSBBS)).

The USPS is developing an electronic Environmental Management Information System (EMIS) that will be linked to the Environmental Management Policy worldwide web homepage. The homepage will give easy access to stored information, currently not available on CSBBS, through EMIS. EMIS will be capable of storing and disseminating large amounts of environmental information focused on key target areas of environmental concern and essential to daily Postal Service operations.

Through EMIS, resources may be allocated and costs of national environmental initiatives may be monitored more effectively through shared information resources.



UNITED STATES POSTAL SERVICE POLICY FOR ENVIRONMENTAL PROTECTION

POLICY

The United States Postal Service is committed to provide employees and customers with a safe and healthy environment. Environmental protection is the responsible thing to do, and makes for sound business practices.

GUIDING PRINCIPLES

- We will meet or exceed all applicable environmental laws and regulations in a cost effective manner.
- We will incorporate environmental considerations into our business planning processes.
- We will foster the sustainable use of natural resources by promoting pollution prevention, reducing waste, recycling, and reusing materials.
- We will expect every employee to take ownership and responsibility for our environmental objectives.
- We will work with customers to address mutual environmental concerns.
- We will measure our progress in protecting the environment.
- We will encourage suppliers, vendors, and contractors to comply with similar environmental protection policies.

A large, handwritten signature in black ink, appearing to read "Marvin Runyon".

Marvin Runyon
Postmaster General

September 1995



October 16, 1995

MEMORANDUM FOR LEADERSHIP TEAM

SUBJECT: Annual Status Report

Attached is a copy of the Annual Status Report of the Postal Service's Environmental Strategic Plan.

During this past year, we have made substantial progress in the development of our environmental program. In addition, we have also been recognized nationally, through various environmental awards, as a leader in environmental excellence. We are continuing to make superb progress in achieving our goal in making environmental excellence an integral part of the way we do business.

We are pleased to provide you with this Annual Status Report of our environmental efforts. If you have any questions, contributions, or suggestions, please feel free to contact me.

A handwritten signature in black ink that reads "Charles Bravo".

Charles E. Bravo
Manager

Environmental Management Policy

cc: Area Environmental Compliance Coordinators
District Environmental Coordinators

UNITED STATES POSTAL SERVICE
ENVIRONMENTAL STRATEGIC PLAN
STATUS REPORT
SEPTEMBER 30, 1995

Two years ago we developed a comprehensive Environmental Strategy Plan for the 1993-2000 period. The plan's strategies and actions were aligned with the Environmental Guiding Principles issued by the Postmaster General in April of 1993 and reissued in September 1995 (enclosed). To support this commitment to a strong and active environmental program, the Postal Service identified 10 target areas -- categorized as either leadership or compliance targets -- to provide focus and direction for developing and implementing plans at the Area, District and plant/facility level. Those original 10 environmental target areas has now been expanded to include Energy and Water Conservation (enclosed).

The plan initially contained 117 tactical actions put forth with a view towards achieving two principle goals:

- Compliance with federal, state, and local laws and regulations by postal facilities at all levels.
- Leadership objectives that establish us as a leading organization in environmental issues.

Integrating the consideration of the environment into our everyday business decision-making process continues to evolve as shown in this status report. The results of this comprehensive program have exceeded our expectations and served as a catalyst for many new ideas and programs. As stated earlier, the energy conservation function has been integrated within Environmental Management Policy and will be expanded to include water conservation. We expect a number of new tactical action items developed over the coming months related to this new target area. What began as 117 separate tactical actions and increased to 135, has now been pared down to 105. To date, 67 tactical actions have been completed, in which 46 have been embedded into continuing programs, with 38 tactical actions ongoing and are continuing to progress (Chart 1). This progress indicates that the managers are buying into the Environmental Strategic Plan. Enclosed are listed some of our most significant environmental achievements during the past two years. Although we have made significant progress carrying out our Strategic Environmental Plan, we still have some important challenges ahead of us. Listed below are some of the challenges we face in the coming year:

- Set goals, develop strategies, and establish programs for the Energy and Water Conservation target area.
- Expand the application of the NEPA process to operational activities and improve the integration of environmental consideration into our business planning process.

- Establish DEC's in every district and ensure they are adequately trained to assume their responsibilities.
- Update, test, and field the Progress in Environmental Protection - Management Information System (PEP-MIS) and the Customer Service and Sales Bulletin Board System (CSBBS).
- Expand our environmental awareness programs and continue reaching out to our employees, and suppliers, vendors, and contractors.
- Intensify our efforts in pollution prevention, recycling, and waste reduction.

The progress we have made is attributed to the diligent work of the Work Groups and their corporate sponsors (Chart 2). They were charged with developing the programs that answered the "how to" to comply with the tactical actions. They, in turn, provided headquarters, Environmental Management Policy, with updates on their progress. Chart 3 represents the current distribution by lead office, of the ongoing tactical actions that are at various stages of completion. This Annual Status Report comprises the detail of the work groups to date.

The attached tabular summary is organized as follows:

Column I Tactical Action Plan

Of the 135 tactical action plans, 30 have been combined with like action (deleted).

The current tactical action plans are numbered 1 to 105.

Column II Contacts

The following is the key for the listings in the contacts column:

- The first item is the Lead Office
- The second item is the Point of Contact
- The third item is the telephone number of the Point of Contact
- The fourth item is the Corporate Sponsor

Column III Concepts

The concept is the work groups "how to" to develop a solution to the Tactical Action Plans.

Column IV Status

This is the status of the tactical action as of September 30, 1995.

Column V Next Step

This column identifies any future efforts necessary to complete the tactical action.

Chart 1 Environmental Strategic Plan

Status of the 135 Tactical Action Plans as of September 30, 1995.

Chart 2 Environmental Strategic Plan

Distribution of the current 105 Tactical Actions by Lead Office as of September 30, 1995.

Chart 3 Environmental Strategic Plan

Distribution of the current 28 Ongoing Tactical Actions by Lead Office as of September 30, 1995.

ENVIRONMENTAL TARGET AREAS

Leadership Targets	Compliance Targets
<ul style="list-style-type: none"> ● Underground Storage Tanks <ul style="list-style-type: none"> - Establish monitoring procedures & reduce number of USTS ● Clean Air Act Amendment <ul style="list-style-type: none"> - Reduce emissions - Develop plan to use alternate fuels ● Hazardous Chemicals <ul style="list-style-type: none"> - ID hazardous substances & use environmentally safe alternatives ● Paint Spray Operations <ul style="list-style-type: none"> - Reduce total number ● Main Transport Equipment <ul style="list-style-type: none"> - Reduce wastestreams & increase lifecycle of materials ● Recycling & Pollution Prevention <ul style="list-style-type: none"> - Conduct P2 assessments, develop recycling programs & reduce waste 	<ul style="list-style-type: none"> ● Regulatory Outreach <ul style="list-style-type: none"> - Work with regulators & local officials ● Sensitivity to State & Local Regulations <ul style="list-style-type: none"> - Be active with associations & local government activities ● Awareness Training (culture change) <ul style="list-style-type: none"> - Train at all levels & increase environmental awareness ● Quality Assurance Reviews <ul style="list-style-type: none"> - Conduct QARs & implement corrective actions ● Energy & Water Conservation <ul style="list-style-type: none"> - Set goals, develop strategies & establish programs

ENVIRONMENTAL TARGET AREAS

Environmental Target Areas provide focus and direction for developing and implementing plans at the Area and District and Plant levels. Two major categories of environmental target areas have been identified: (1) **leadership targets** which are intended to establish the USPS as a leading organization in environmental initiatives; and (2) **compliance targets** which are intended to reduce liability and ensure USPS compliance with federal, state and local laws and regulations.

LEADERSHIP TARGET AREAS

1. **Underground Storage Tanks**

Tanks used for underground storage of fuels and hydraulic fluid present the potential for leakage and high cost for remittal, penalties, and fines.

- Reduce number of underground storage tanks
- Complete surveys and upgrade remaining tanks
- Establish monitoring and inspection procedures
- Establish monitoring and inspection requirements for above ground tanks required by state and local laws

2. **Clean Air Act Amendments**

Increasingly stringent amendments of the CAA will impose compliance requirements for reducing emission sources and using alternate fuel vehicles.

- Identify applicable laws, regulations
- Reduce emissions from stationary sources, e.g., underground storage tanks, paint spray booths, diesel generators
- Develop plans to use alternate fuels
- Increase the utilization of alternate fuel vehicles
- Obtain air credits and rebates, wherever possible

3. **Hazardous Chemicals**

Many postal facilities use chemicals which are identified as hazardous waste for cleaning, repairing, printing and painting operations.

- Identify hazardous substances
- Determine potential for substituting environmentally safe alternatives
- Work to reduce the generator status to conditionally exempt, wherever possible

4. **Paint Spray Operations**

Numerous environmental laws apply to paint spray operations including the Clean Air Act and the hazardous waste laws. In addition, most postal systems are not the most efficient as noted in the Buffalo Pollution Prevention Study performed by EPA.

- Minimize liability and reduce costs by reducing total number of paint spray operations
- Convert remaining operations to most efficient technologies including High Volume Low Pressure Systems (HVLP) and low volatile organic paints

5. Recycling/Pollution Prevention (P²)

Activities in support of recycling and pollution prevention generate revenue, save money and reduce liability. Increasing our activities in these endeavors increases customer and employee satisfaction and identifies the Postal Service as a good neighbor and leader in environmental issues. Moreover, these initiatives support sustainable development for future generations.

- Complete P² plans at all plants, VMFs, and large AOs
- Establish procedures for wastestream assessment at all facilities
- Select methods for recycling, e.g., Southwest Area model
- Reduce/eliminate disposal contracts
- Generate revenue from recycling activities

6. Mail Transport Equipment

Much of the waste generated at a plant is cardboard, plastic, shrink-wrap, and pallets used in handling mail.

- Establish strategies to reduce wastestream and increase life cycle of materials, including use of long-life pallets, reusable trays
- Establish recycling programs of MTE items
- Work with MTE centers on recycling

COMPLIANCE TARGET AREAS

1. Quality Assurance Reviews

A review system is essential to (1) identify and ensure compliance with environmental regulations in all facilities and (2) to identify and monitor implementation of corrective measures and improvements.

- Implement immediate corrective actions
- Implement pollution prevention initiatives
- Change applicable work practices
- Initiate review and evaluation process in all "high-risk" facilities on a regular basis
- Establish a follow-up program
- Ensure VMFs and Plants conduct a self-review (brief checklist) annually (e.g., VMF model review, section six)

2. Regulatory Outreach

Effective compliance with applicable laws and regulations requires consistent interaction with regulators who monitor public and private organizations. Developing good working relationships with regulators ensures awareness of regulatory changes and increases timely compliance.

- Participate in award programs sponsored by regulatory agencies
- AECCs and DECCs should work with appropriate regulators to help affect federal, state and local laws which are beneficial to the environment and the Postal Service
- Participate in Regulatory Task Forces and industry groups
- Attend conferences and workshops sponsored by regulatory agencies
- Encourage facility managers to contact appropriate local environmental officials

3. Sensitivity to State and Local Regulations

To enhance the Postal Service's position as a good neighbor and leader in environmental initiatives, community outreach and environmental practices need to match local laws and regulations. Postmasters, managers, environmental professionals and other employees need to more actively participate in state and local activities.

- Managers and environmental professionals should participate in associations and local government activities
- Encourage employees at all levels to participate in appropriate environmental activities, e.g., local government recycling programs, local Earth Day events
- Provide Postmasters Training and state specific Postmasters Guides

4. Awareness Training (Culture Change)

Successful implementation of environmental initiatives first requires an organization-wide awareness and understanding of roles and responsibilities to increase compliance with applicable laws and regulations.

- Provide multi-media training at all levels on environmental issues and initiatives
- Develop communications initiatives to increase employee awareness
- Brief union and management association leaders to stimulate environmental awareness
- Provide local training and/or have key environmental stakeholders attend environmental training at the Technical Training Center

5. Energy Savings Program

Energy savings techniques and technologies will be implemented to meet the Energy Policy Act (1992) requirement of a 20% reduction in energy use by the year 2000. In addition, strategies will be implemented to achieve water conservation.

- Designate Energy Coordinators
- Implement high ROI projects
- Focus on lighting opportunities with new technology
- Use shared energy savings as appropriate
- Implement demonstration projects
- Evaluate renewable energy opportunities
- Review energy rates to obtain best values
- Promote environmental awareness
- Conduct training on energy
- Target high energy rate utilities/areas
- Partner with other federal agencies when aggregating (GSA, DOE, DOD) and negotiating with utility companies

USPS ENVIRONMENTAL PROGRAM SIGNIFICANT ACHIEVEMENTS

District Environmental Coordinators

- In the final stages of establishing DEC's in each District.

Expanding Alternate Fuel Program

- More than 4,185 vehicles converted to compressed natural gas with plans to increase to 6,500 by the end of 1995.
- Testing ethanol-fueled and electric powered vehicles.
- Leading an international effort on studying alternative fuels with the Universal Postal Union.

Recycling and Pollution Prevention

- Developed a National Strategy.
- VMFs are reducing the number of chemical line items which has resulted in cost avoidance related to hazardous materials management and cost savings through waste reduction of less frequently used chemicals.
- Significantly expanded our recycling effort both in what we purchase and what we discard, especially in UBBM.
- Using recyclable material in many of our Mail Transport Equipment.
- More than 400,000 tons of wastepaper, cardboard, plastics, cans, and other material were recycled last year. These activities generated about \$6.4 million revenues this year.
- The Postal Service is a national leader in the use of re-refined oil. More than 100,000 postal vehicles currently use re-refined oil.

Underground Storage Tanks

- Removed over 500 nationwide since 1992.
- Issued a new MI establishing guidance that will minimize the installation of additional tanks.

Paint Spray Operations

- Sixty-nine painting operations have been deactivated, with the remainder either discontinuing, consolidating, or upgrading their painting operations.

Significant Achievements (continued)

Reduction of Hazardous Waste

- Issued a new policy goal to virtually eliminate 17 targeted chemicals by 1998.
- We are on target to achieve a 50% reduction by the end of this year.
- Developing a new MI on integrated Pest Management.

Environmental Awareness and Training

- Sixteen environmental courses are now offered at the TTC.
- Environmental content is being embedded into 45 other courses.
- Over 20,000 employees have received environmental training in 1995.
- Environmental awareness is part of new employee orientation.
- Updated and revised the Environmental Resources Handbook that outline environmental roles and responsibilities.
- Using PSTN, video-conferencing, articles in the postal bulletin, and special events such as Earth Day to increase environmental awareness.

Quality Assurance Reviews (QARs)

- Completed the development of a QAR manual and MI.
- Conducted over 105 QARs in which 60 were conducted this year.

National Recognition for Environmental Leadership and Excellence

- Recognized by government and industry for environmental leadership and excellence.
- Received several White House and industry awards for recycling and waste reduction programs.

OCT 31 1996

Mr. Steven A. Herman, Assistant Administrator
Office of Enforcement and Compliance Assurance
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Dear Mr. Herman:

TVA appreciates the opportunity to participate in the Interagency Pollution Prevention Task Force that is developing the Federal Government Environmental Challenge Program and the Code of Environmental Management Principles (CEMP).

TVA has developed and commenced implementation of a state-of-the-art Environmental Management System (EMS) to integrate environmental management into business planning and operations ensuring that resources are committed to carry out TVA's environmental goal. The TVA EMS was designed concurrently with the development of the ISO 14001 Environmental Standard and the CEMP and has been aligned to the extent practicable with both.

Presently, our operations management is reviewing the CEMP as it relates to the TVA EMS to determine the implications on the operation of their facilities. Once their review is complete, we will provide you with more definitive information on TVA's position and plans regarding the CEMP.

If you have questions relating to TVA's Environmental Management System and its relationship to the CEMP, please contact Jon Loney at (423) 632-3012.

Sincerely,

William H. Kennoy, P.E.

LRB:SC

cc: Craven Crowell, ET 12A-K
Johnny H. Hayes, ET 12A-K
Alan Carmichael, ET 12A-K
Kathryn J. Jackson, WT 11A-K
Jon M. Loney, WT 8C-K
Ronald J. Williams, CTR 2C-M
Norman A. Zigrossi, ET 12A-K

Prepared by Lynn R. Brown; reviewed by Jon Loney and Ronald J. Williams; approved by Kathryn J. Jackson.

CTS Number: 080444



ACQUISITION AND
TECHNOLOGY

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000

Mr. Steven Herman
Assistant Administrator
Office of Enforcement and Compliance Assurance
Environmental Protection Agency
Mail Code 2261A
401 M Street SW
Washington, DC 20460

05 NOV 1996

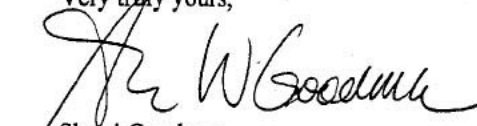
Dear Mr. Herman:

I endorse the draft Code of Environmental Management Principles (CEMP) on an agency level as described in your letter dated September 3, 1996.

The Department of Defense is fully committed to protecting the environment and building excellence into the management of its programs. The Department is using ISO 14001 in the development of its current strategic plan and is evaluating the adoption of ISO 14001 as an Environmental Management System for the entire Environmental Security program. Our goal is continuous improvement of our environmental performance through a cost-effective implementation strategy. The enclosed implementation plan describes how the CEMP is incorporated into the Department's existing environmental management system.

I would be happy to brief you on the Department's Environmental Security program. If you have any questions, please do not hesitate to contact me at (703) 695-6639 or Mr. Peter Walsh at (703) 604-1529.

Very truly yours,


Sherri Goodman
Deputy Under Secretary of Defense
(Environmental Security)

Enclosure

IMPLEMENTATION OF THE CODE OF ENVIRONMENTAL MANAGEMENT PRINCIPLES

Principle 1: Management Commitment

Performance Objectives:

1.1 Obtain Management Support

1.1.1 Policy Development

The Department of Defense (DoD) Environmental Security Directive and supporting instructions signed by the Under Secretary of Defense (Acquisition and Technology) establish environmental protection goals and developed supporting strategies that fully complement accomplishment of the Department's overall mission. The instructions also establish budget priorities and measures for evaluating how well established goals are being met. (see attachment 2)

1.1.2 System Integration

The DoD Acquisition Directive, recently published, directs that environmental performance must be considered in the acquisition process along with other factors such as mission performance and cost. In addition, the DoD Planning instruction requires the completion of an environmental analysis in accordance with the National Environmental Policy Act to aid decision making.

The Department annually provides budget development guidance direction to the Services through both the Program Objective Memorandum (POM) Preparation Instruction and Defense Planning Guidance. These documents specifically identify environmental performance goals or accomplishments. Thereafter, the Deputy Under Secretary of Defense (Environmental Security) reviews the Services' budget submissions to ensure they meet guidance.

1.2 Environmental Stewardship and Sustainable Development

The Department's policies, as described in the Environmental Security Directive and supporting instructions, and annual budget planning guidance, promotes environmental stewardship and sustainable development.

The DoD policies conserve natural and cultural resources, and promote biological diversity and total ecosystem land management. The DoD instructions require completion of inventories of special resources such as wetlands, endangered species habitat, archaeological sites and historic properties. They further require preparation of integrated plans for their proper management. The Department's land management practices at training ranges balance the military training needs with the ability of the land to sustain and recover, thereby protecting valuable resources and ensuring future realistic training opportunities.

The DoD instructions also promote the conservation of resources through the establishment of goals and reporting requirements for the reducing solid waste, hazardous waste, and toxic substances released from an installations each year. The Department's instructions also require a recycling program at every installation and establish goals and reporting requirements for increasing the total volume of material recycled each year. The Department's instructions

also requires, with some exceptions, the purchase of EPA-specified products made with recycled content. The Department also encourages the purchase of environmentally preferred products by maintaining and distributing a catalogue of products. In addition, it is the Department's policy, as stated in instruction and budget planning guidance, to give preference to the use of pollution prevention projects over "end of pipe" treatment or disposal to meet compliance requirements.

The Department is in process of implementing a program to educate or train personnel to meet the environmental responsibilities of their jobs. The Department's Environmental Security directives and supporting instructions establish goals for compliance, pollution prevention and conservation and require periodic reporting on progress towards meeting those goals through measures of merit.

DoD personnel regulations require that supervisors identify major job components in employees' job descriptions and prepare evaluation criteria for those major job components in employees' annual work plans. Supervisors therefore evaluate persons with environmental responsibilities on the performance of those responsibilities, as appropriate. Similarly, military personnel with environmental responsibilities would be evaluated on their performance of those responsibilities. Installation commanders are evaluated on the total performance of the installation. The installation's environmental performance is one of many considerations that would contribute to the commander's performance appraisal.

The Department believes this is the appropriate interpretation of the phrase "organizational units should take steps to measure the organization's performance by incorporating specific environmental performance criteria into managerial and employee performance evaluations."

Principle 2: Compliance Assurance and Pollution Prevention

Performance Objectives

2.1 Compliance Assurance

The DoD's directive and supporting instructions require compliance with federal, state and local environmental laws. Annual budget guidance requires the full funding of actions to stay in compliance and to get into compliance if currently out, and a prudent investment in those actions necessary to meet standards whose effective date is in the future. The Department's instructions also require that each installation conduct a self audit for environmental performance at least annually, and that the Services report progress on specific compliance and pollution prevention measures of merit annually to the Deputy Under Secretary of Defense (Environmental Security). The reported progress is also reported in the Department's Annual Environmental Quality Report to Congress. The Department's instructions establish Regional Environmental Coordinators to work closely with federal, state and local environmental regulators in identifying potential problems and seeking resolution. The Department requires that all contractors on military installations meet appropriate environmental standards.

2.2 Emergency Preparedness

The DoD instructions require compliance with all applicable federal, state, and local environmental laws. These laws include the requirement to prepare and exercise of emergency

response plans. The checklist developed to aid the mandatory environmental self audit includes this requirement.

2.3 Pollution Prevention and Resource Conservation

The DoD Pollution Prevention instruction establishes pollution prevention goals and strategies. It requires all installations accomplish an opportunity assessment and develop a pollution prevention plan. Further, the instruction requires installations to give preference to pollution prevention projects over "end of pipe" treatment and disposal to meet compliance requirements. The Department's annual budget guidance reinforces this preference for pollution prevention solutions. The instruction also establish goals for reductions in solid waste and hazardous waste released from an installation and requires periodic reporting by the Services on their progress towards achieving these goals.

Principle 3: Enabling Systems

Performance Objectives

3.1 Training

The Department is developing an extensive training program so that all persons can meet the environmental responsibilities of their jobs. The Department provides an environmental awareness program during military recruit training. The Services have evaluated the environmental requirements of military enlisted personnel jobs, such as jet engine maintenance and fire fighting, and are currently in process of embedding appropriate environmental instruction into the technical training programs. The Department is also in process of inserting discussion of national and international environmental in professional (officers) military education programs. The Services are developing an integrated professional continuing education and training program for both civilians and officers. This program provides the legally mandated training for those persons handling hazardous materials. It also provides education for environmental professionals so they can meet the changing challenges of their jobs. The Department is also inserting environmental instruction into the education programs for non environmental professionals whose actions could affect the environment. For example, the Department is currently revising the curricula at the Defense Acquisition University so that persons managing acquisitions in the future would better understand environmental requirements and the environmental cost implications of their decisions. The Services and the Department conduct Environmental Leadership Courses to prepare installation commanders and senior officials to understand and meet the environmental responsibilities of their jobs.

3.2 Structural Supports

The Department's Environmental Security Directive and supporting instructions establish environmental goals, supporting strategies, budget priorities, and measures of merit that support overall organizational objectives. The Department reports progress towards achieving the goals in its annually environmental quality and restoration reports to Congress.

3.3 Information Management, Communication, Documentation

The Department is currently developing a Defense Environmental Security Corporate Information Management (DESCIM) system to provide for more effective and efficient

management of the environmental program. The system, to be used by all Services, standardizes data entries and information display. The system is being developed to meet management needs at all organizational levels - installation, major command and headquarters.

Principle 4 Performance and Accountability

Performance Objectives

4.1 Responsibility, Authority and Accountability

The Department is in process of implementing a program to educate or train personnel to meet the environmental responsibilities of their jobs. The Department's Environmental Security directives and supporting instructions establish goals for compliance, pollution prevention and conservation and require periodic reporting on progress towards meeting those goals through measures of merit.

DoD personnel regulations require that supervisors identify major job components in employees' job descriptions and prepare evaluation criteria for those major job components in employees' annual work plans. Supervisors therefore evaluate persons with environmental responsibilities on the performance of those responsibilities, as appropriate. Similarly, military personnel with environmental responsibilities would be evaluated on their performance of those responsibilities. Installation commanders are evaluated on the total performance of the installation. The installation's environmental performance is one of many considerations that would contribute to the commander's performance appraisal.

4.2 Performance Standards

The Department's instructions establish environmental compliance performance measures. The instructions further require the Services report to the Deputy Under Secretary of Defense (Environmental Security) semi-annually on their environmental compliance performance using these established measures.

The Department's instructions establish an awards program to recognize outstanding performances by installations and by individuals. The Services select winners in each of 17 categories from nominations from their respective installations. These Service winners, in turn, compete for recognition as best in the DoD.

Principle 5: Measurement and Improvement

Performance Objectives

5.1 Evaluate Performance

5.1.1 Gather and Analyze Data

The Department is in process of implementing a automated data management system to collect data to support management needs at installation, major command and headquarters levels.

The Department's Environmental Security directive and supporting instructions establish goals and require the Services to provide assessments, at least annually, to the Deputy Under Secretary of Defense (Environmental Security) on progress towards achieving those goals.

5.1.2 Institute Benchmarking

The Department is currently evaluating environmental operations in other government and non-government organizations which have similar environmental challenges.. The effort is scheduled for completion by January 1997.

5.2 Continuous Improvement

The Department is promoting numerous initiatives to improve environmental performance. For example, the Department is establishing hazardous materials pharmacies at most installations and on ships. Pharmacies provide central control of purchasing, storing, distributing and disposing of these materials. Implementation of pharmacies results in reduced purchases, disposals, and potential for violations. Another example is the "ENVVEST" initiative, jointly sponsored by EPA and the Department. Under this initiative, a regulator may grant relief from requirements that provide little additional health protection or environmental improvement. In return for such relief, the installation commander, in coordination with the regulator, commits the money originally programmed to satisfy the "waived" requirements, to fund high payback pollution prevention projects. A third example is the single process initiative. Under this initiative, program managers for different weapon systems supported by a single process agree to a single test and validation process for an environmentally sound alternative to that process. If the test and validation process is successful, changes affecting all weapons are made simultaneously, thereby improving the environment and reducing costs.



DEPARTMENT OF VETERANS AFFAIRS
DEPUTY ASSISTANT SECRETARY FOR ACQUISITION AND MATERIEL MANAGEMENT
WASHINGTON DC 20420

DEC 24 1996

Mr. Steven A. Herman
Assistant Administrator
U.S. Environmental Protection Agency
Office of Enforcement and Compliance Assurance
401 M Street, SW
Washington, DC 20460

Dear Mr. Herman:

We are responding to your letter regarding the Code of Environmental Management Principles (CEMP). The Department of Veterans Affairs (VA) is committed to maintaining the highest level of environmental compliance at its facilities and in enhancing the management of environmental programs Department-wide.

We have reviewed the five principles that comprise the CEMP and believe they provide a sound basis in which to enhance the management of environmental programs at VA. We intend to develop a VA CEMP that addresses these principles. My staff is working with other organizations within VA to affect the foregoing programs. The initial draft will be available by February 1, 1997.

If you have any questions, contact Mr. John Staudt, Chief, Environmental Engineering Division (10NB), at (202) 273-5863.

Sincerely,

A handwritten signature in cursive script that reads "Gary J. Krump".

Gary J. Krump
Environmental Executive