

EXECUTIVE GUIDE TO FACILITY ENVIRONMENTAL MANAGEMENT

BY THE CIVILIAN FEDERAL AGENCY TASK FORCE
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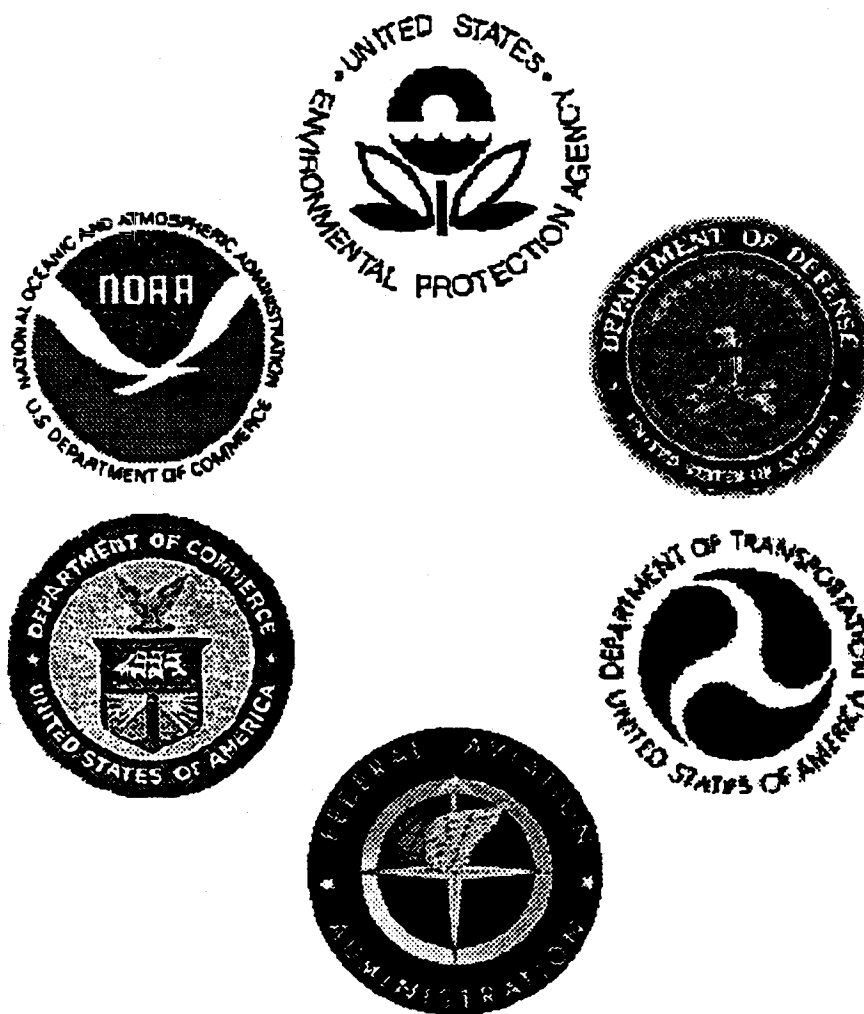


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Foreword

Many Federal agencies, each with their own unique mission, have structured environmental management programs in accordance with legal requirements that are applicable to the operational nature of their facilities. In response to an interagency initiative to improve the quality of environmental management programs, representatives of the Civilian Federal Agency Task Force (CFATF) identified the need for a guidance document to further the awareness of agency executives with regard to key environmental issues, responsibilities, and potential liabilities.

The *Executive Guide to Facility Environmental Management* is specifically designed to meet these objectives and offer planning strategies and activities which will serve to enhance the administration and implementation of a comprehensive environmental management program. The intent of this guide is to provide the participating agencies with a simple introductory reference document that can be easily modified to suit individual agency needs. In keeping with the intent, much of the detail of the environmental statutes is not covered in this document.

What, Why and Who

Environmental law is a complex system of statutes, orders, regulations, guidelines, and court cases; many of which overlap. The term **environmental compliance** refers to an entity's status with regard to the numerous Federal, State, and local environmental laws and regulations. An **environmental management program**, or system, is the framework for or the method of guiding an agency to achieve and maintain environmental compliance in accordance with agency goals, and in response to constantly changing regulations, social, economic, and political pressures, and environmental risks. An environmental management program will keep facilities in compliance with Federal, State, and local laws and regulations, will clearly define agency policies, will identify and acknowledge risks, and gather funds, resources, and staff.

Total environmental compliance is the ultimate goal but is often difficult to attain. There are more than 50 Federal environmental laws and amendments, 34 of which have been passed within the last twenty-five years. This amounts to approximately 14,000 pages of codified environmental laws spanning over a full range of media (air, water, solid waste,...). There are also a myriad of Executive Orders and a host of State laws and local ordinances. Many of these laws, and their implementing regulations, are extraordinarily complex, in part due to the multi-disciplinary subject matter.

Executive Order 12088

Executive Order 12088 is the critical link between Federal environmental regulations and Federal facilities. Entitled "Federal Compliance with Pollution Control Standards," Executive Order 12088 was signed on October 13, 1978. This order mandates executives to ensure "that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to Federal facilities and activities under the control of the agency."

Federal Facilities Compliance Act

The Federal Facilities Compliance Act of 1992 (Section 6001, as amended by PL 102-386) specifically subjects Federal facilities to all provisions of Federal, State, interstate, and local hazardous waste laws and regulations. The law also allows EPA and the States to impose fines and penalties for Federal Facilities found to be out of compliance by regulatory inspectors. In FY94 EPA and the States issued 40 administrative orders totaling \$6,514,289 in penalties. Facilities that serve only administrative functions typically will produce minimal amounts of hazardous waste as opposed to industrial facilities; however, hazardous waste disposal is only one among many environmental requirements at the facility level.

In 1970 there were only 500 pages in the Code of Federal Regulations dealing with

environmental issues.

In 1994 there were more than 13,000 pages of environmental regulations implementing over 50 national environmental statutes.

States have also enacted their own environmental laws and implemented their own regulations that rival the Federal regulatory structure in scope and complexity.

Federal facilities are now subject to multiple layers of regulation by Federal, State, and local laws and regulations.

Environmental compliance requirements for Federal agencies will increase through the end of the century, and will eventually encompass all operations except where specifically excluded by law. Therefore, Federal agencies will have to respond to a vastly expanded compliance regime in the near future.

The Executive Challenge

The executive's challenge is to find solutions to managerial and budgetary limitations to achieving the goal or standards expressed in the law. An executive is ultimately responsible for compliance with all applicable environmental laws and regulations for facilities under his management. Compliance is not just a matter of avoiding claims liability or criminal prosecution. It also benefits the prime mission of the agency by preventing operational delays or shutdowns, as well as building good public relations.

The Executive Role in Facility Environmental Compliance

The government executive's role is much the same as that of the executive in private industry: Executives are charged with taking actions that make it possible for individuals and groups to make the best contribution to an agency's objectives. This is one definition of management. Management fundamentals apply to a program for environmental compliance just as well as they do to manufacturing, services, public relations, finance, research, and administrative support to name a select few of numerous activities undertaken in the daily course of government business. The fundamental management functions include *planning, budgeting, staffing, directing, and review*.

An executive must lead the environmental management program. The executive's role is to take actions that make it possible for facility managers and employees to make the best contribution to the agency's objective of achieving compliance. The executive outlines general organizational and policy changes which are necessary, delegates implementation to facility managers and supervisors, and sets budget levels, and indicates general usage of funds. Executives, in general, focus on long-term projects.

An environmental management program at the facility level entails different responsibilities. The facility manager's duties are to coordinate environmental affairs with executives, environmental staff, the regional environmental compliance officer, to ensure that compliance requirements are integrated into all levels of facility management and operations, and to apply for all necessary permits. Managers and supervisors focus on short-term, routine actions and projects. Detailed budgeting is also done by facility managers and supervisors.

Compliance programs are established for several objectives. One objective is to provide assurance to managers and executives that facilities are in compliance. Another focuses on assist the facility in conforming to legal and regulatory requirements. A third objective is to assess risks and identify potential hazards for correction. Environmental compliance is achieved through cooperative efforts from many levels within an organization. The role of the agency executive is to provide leadership and strategic planning to ensure that the environmental management program accommodates all applicable environmental media and is flexible enough to be implemented at various types of facilities.

Organizing for Compliance ***Environmental Management Principles***

A starting point for organizing an environmental management program is to refer to recognized standards or principles, in the environmental field there are many. The International Organization for Standardization (ISO), an independent standard-setting body comprised of over 50 countries, began in 1992 to develop one such set of environmental management standards. These standards are now known as ISO 14000, and are expected to be ratified in 1996. They provide a flexible, performance-oriented framework for integrating environmental considerations into mission operations, without dictating performance requirements or specifying operating procedures. Some program elements which ISO 14000 and the other guidelines share include:

- *Top management commitment and support*
- *Establishment of environmental policy, goals, and implementation procedures*
- *Integration of the environmental management system throughout operations*
- *Performance measurement and reporting to ensure compliance*
- *Analysis to identify potential problem areas*
- *A proactive approach to environmental issues*
- *Fully trained environmental personnel*
- *A culture of environmental stewardship and continuous environmental improvement*

Management Infrastructure

At the executive level, the strategic goals of a comprehensive environmental management program are established. Potential risks and liabilities are identified and procedures are instituted to address environmental concerns. When required, organizational and policy changes are made in order to fulfill the agency's objective of achieving and maintaining its environmental visions and goals.

In general, there is an environmental compliance officer and support staff at the agency headquarters level who create the necessary policies and programs and monitor performance in reaching the environmental strategic goals. This includes developing compliance procedures, monitoring Federal legislation and regulations, implementing training programs, and ensuring that environmental funding requirements are reflected in budget submissions. Additionally, the compliance officer reconciles regulatory requirements imposed by EPA and the States against the compliance status of facilities, and advises management so that they can make informed decisions regarding environmental liabilities.

At the facility level, it is the facility managers that are ultimately responsible for the implementation of the environmental management program even if they delegate that duty to an environmental coordinator. Some of their many responsibilities include the acquisition of environmental regulatory permits, maintenance of records, and development of facility or site-specific environmental, health and safety (EH&S) plans. The environmental coordinator is usually assigned the responsibility to identify and resolve compliance issues. The coordinator reports to the facility managers and oversees the implementation of the compliance program at the facility level. Other responsibilities include the coordination of compliance matters between the facility and agency headquarters, and ensuring that facility personnel receive appropriate training.

Prevention-based Management

An environmental management program is a set of activities that accomplish the environmental vision, principles and goals of an organization, including compliance assurance. As laws change, deficiencies arise, and/or organizational environmental principles develop, adjustments must be made to activities such as staffing, training, budgeting, and corrective action

procedures. Prevention-based management is concerned with assessing potential environmental, health, and safety risks and correcting them before environmental impairment or regulatory violations occur. This serves to reduce the long-term costs of environmental management activities by avoiding operational delays and minimizing legal liability. It establishes compliance as the floor rather than the ceiling of environmental performance.

Pollution prevention is an example of one operational aspect of prevention-based compliance. Pollution prevention is reengineering to reduce the volume and toxicity of waste materials at their source. Material management, disposal, and cleanup costs can have a significant impact on the operating costs of a facility. Pollution prevention reduces costs through substitution of less toxic materials, more efficient use of existing materials, more economical inventorying, and timely procurement.

Prevention-based management provides assurance that environmental laws, regulations, and permit requirements are being adhered to at the facility level. It also helps to determine if adequate staffing and funding resources are being allocated in accordance with the facility's type, size, and nature of operations. This particular approach goes beyond the objective of achieving compliance, in that it seeks to reduce risk of environmental impairment and third party action. It is to the agency's advantage, and it is the executive's responsibility to ensure that managers and supervisors at the facility level practice prevention-based management.

Budgeting for Environmental Management

Executive Order 12088 requires that "The head of each Executive agency shall ensure that sufficient funds for compliance with applicable pollution control standards are requested in the agency budget." Environmental management funding requirements must be clearly identified and prioritized so that compliance can be achieved in a timely manner. Budgeting is the most cost-effective way of ensuring the availability of funds to address regulatory compliance and environmental management issues. Listed below are three general categories which comprise the compliance budget.

Inherited costs are a result of past operations. These costs are usually non-recurring and can generally be resolved through capital improvement projects.

Operational costs are incurred as the direct result of the operation of the facility and must be budgeted for at the facility level. Operational costs are usually recurring and are required by environmental regulations. Examples of operational costs include licensing and permit fees, and training.

Special situations are accidents that create an emergency situation and require immediate corrective action. The cost to correct special situations is difficult to estimate, is often expensive, and can shutdown operations. Although, there is no way to know exactly how much money will be needed, the study of past records will usually provide a reasonable planning figure.

Federal facilities, like most public entities, face problems in securing adequate funds to ensure environmental compliance and to remedy situations of noncompliance. The process for obtaining funds poses unique problems. For instance, the Anti-Deficiency Act places limitations on the ability of officials to commit funds they are not authorized to spend. The obligation of Federal facilities to comply with environmental laws and regulations is not altered by lack of funds. Inadequate funding cannot be used as a legal defense for noncompliance.

Staffing

The responsibility of the executive is to ensure that middle management and facility managers select, train, and manage the environmental program staff to meet agency objectives. There are many options available to facility managers to staff for compliance. It is useful to identify the desired areas of expertise. Typically, desired areas of expertise include environmental

law, environmental control technologies, scientific disciplines, facility operations, auditing, and management systems.

Program staff, including facility managers and supervisors, need to know the laws and regulations and understand the basics of environmental, health, and safety control technologies, a knowledge of facility operations and processes, and an understanding of management systems. Management systems include information on how work is planned, implemented, controlled, and reviewed. The program staff will include technical experts who will be able to recognize, analyze, and recommend corrective actions for particular situations or operations.

Training

Some training requirements are explicitly mandated by environmental laws or regulations; however, there are also implicit requirements. Since ignorance of the law is not satisfactory defense from prosecution for individuals or agencies, it is important that staff receive both the required and implied training to ensure environmental compliance. Additionally, Federal facility employees can benefit from environmental awareness training, which stresses the roles and responsibilities of the individual as well as the facility. It can also detail facility policies, outline major programs and initiatives, stress the importance of pollution prevention and recycling, and identify the consequences of noncompliance.

Reporting and Recordkeeping

Environmental incidents will occur even when environmental programs are adequately staffed and have sufficient funds to undertake compliance activities. Incidents, such as hazardous materials releases and permit violations, must be reported promptly and accurately, and accurate records must be kept, in order to satisfy legal requirements. EPA encourages self policing.

Agency executives must ensure that facilities are practicing timely reporting and continuous, complete recordkeeping. In particular, recordkeeping can be very helpful in demonstrating the level of facility compliance activities. Documents should be easily accessible at facilities, and there should be a file management system in place to locate and retrieve files currently being used. Records that should be retained at a facility include waste manifests, permits and permit applications, emergency plans, testing records, inventory and storage records, maintenance and repair logs, and employee training records.

There is also a legal and regulatory aspect to recordkeeping and reporting. Most environmental statutes provide the EPA with broad authority to obtain information from Federal facilities. Environmental statutes require facilities to collect specified information and report those findings to the EPA. They also authorize the EPA to require facilities to compile, store, and report data to verify compliance. These requirements call for a variety of reports and records that can be placed in several broad categories: periodic performance reporting, recordkeeping, reports of problems, reports needed for non-enforcement matters, reports of compliance, and non-emergency notification.

The EPA's compliance monitoring efforts of Federal facilities is highly dependent upon accurate reporting and recordkeeping by individual facilities. The EPA places high priority upon enforcement actions, including criminal prosecutions, in cases of deliberate non-reporting, falsification, or distortion. Noncompliance, violations, and potential incidents are ideally discovered through internal audits rather than formal inspections by a State agency or the EPA.

Performance Assurance and Top Management Commitment

An agency executive can participate in a variety of environmental management activities in order to determine the adequacy of prevention-based management measures. For example, an agency executive can initiate an evaluation of the environmental training courses that are currently available to employees and may recommend specialized courses for operators at target facilities

with a history of compliance problems. Another important demonstration of top management concern and compliance assurance activity is the periodic review of internal auditing procedures. This activity serves to ensure that facility operations and practices are being conducted in a manner that is consistent with environmental requirements and standards. Periodic examination of reports and records is also a valuable performance assurance and management activity that helps to ensure that program objectives will be met.

Regulatory Tracking

Regulatory tracking is a formal system to routinely follow and interpret additions and changes to Federal, State, and local regulations. The information acquired from tracking can be used to determine the applicability of the regulations to the agency or facility, and determine how to meet the added requirements.

Auditing

Auditing is a systematic, documented, periodic, and rigorous review of existing programs and management systems to ensure consistency with environmental policy, laws, and regulations. Agency executives would be well-served to implement an aggressive in-house auditing program at all facilities under their control. Auditing is a critical part of a prevention-based management strategy in that it often identifies potential compliance violations. Auditing is also one of the most important activities for minimizing liability. The absence of an auditing program could indicate to regulatory agencies a lack of commitment on the part of facility officials.

It is the policy of the EPA to encourage Federal facilities to conduct internal compliance audits. The Department of Justice has also issued a policy document intended to encourage environmental auditing. This document identifies factors that would affect criminal prosecutions for environmental violations. It also states that internal auditing and voluntary disclosure of environmental violations would be mitigating factors that the Department of Justice would consider in exercising its prosecutorial discretion under environmental laws.

An audit investigates the functional components of the environmental management program. The major areas of investigation are: 1) compliance with laws, regulations, and permits; 2) progress in implementing the environmental management program; 3) amount of emissions, discharges, and waste released into the environment; 4) impact of noncompliance on health, safety, and the environment; 5) pollution prevention potentials and use of recyclable resources; 6) frequency of environmental incidents; 7) identification of potential hazards and risk assessment; 8) resource allocation and program funding; and 9) environmental management systems.

Regulatory Inspections

The environmental compliance of a facility can be determined either by auditing or by a formal inspection by a regulatory agency. The EPA or the State will generally notify a facility of their intent to inspect; however, by law, regulatory agencies are authorized to inspect Federal facilities at any time. These regulatory inspections normally concentrate on one particular program area, such as hazardous waste management; however, EPA has initiated a multi-media enforcement strategy where all environmental compliance areas are evaluated during a single inspection. The EPA's Federal Facilities Compliance Strategy (also called the 'Yellow Book') contains inspection frequency guidelines for different types of facilities and for different program areas.

Once an inspection is completed, the regulatory agency will provide the facility manager with an exit briefing summarizing the findings. The regulatory agency normally does not produce a written report. Instead, the facility manager or executive will receive a letter within six months after the inspection defining any non-compliance. This letter is referred to as a Notice of Violation (NOV) or a Notice of Non-compliance (NON). The letter documents the compliance

status, based upon the inspection, and requests the facility to provide a response detailing a corrective action plan. If the regulatory agency finds the facility to be in compliance, the facility manager or executive may or may not receive written confirmation.

These notices should be resolved through negotiation between the facility and the regulatory agency. If the facility fails to adequately respond, or is late in responding, the regulatory agency will seek to negotiate a Compliance Agreement or a Consent Order. (Compliance Agreements are used where the EPA does not have statutory administrative authority.) The EPA may seek an Agreement or Order immediately if they feel there is an imminent and substantial endangerment to human health or the environment.

Understanding Risk and Liability ***Enforcement Actions***

Federal agencies must comply with Federal environmental laws to the same degree as non-Federal entities. The EPA utilizes administrative enforcement mechanisms such as Compliance Agreements and Consent Orders to address violations at Federal facilities. Before 1992, the EPA generally did not assess civil penalties against Federal facilities. The Federal Facilities Compliance Act of 1992 (FFCA) allows the EPA and States to assess administrative penalties and fines against Federal agencies for environmental violations, specifically for hazardous waste violations. Similar provisions in State and local environmental laws complement these enforcement mechanisms, and these regulatory agencies are becoming more aggressive in their enforcement.

Criminal Liability

Agency executives should be aware that they can be held criminally liable for their actions. The Federal Facilities Compliance Act specifically states that Federal employees are subject to criminal sanctions under Federal and State law. In general, the prosecution must prove a willful intent to commit a crime. For statutes protecting public health and welfare, the Department of Justice has brought criminal proceedings against Federal employees, including executives and managers, because Federal facility compliance efforts were insufficient, attitudes were inappropriate, and budgetary constraints were being used as excuses for noncompliance.

The Resource Conservation and Recovery Act (RCRA) governs the treatment, storage, disposal, and handling of hazardous waste. This act imposes particularly stiff criminal sanctions for violations. Fines can reach up to \$250,000 for an individual and jail terms can be as long as 15 years for the crime of “knowing endangerment”. Courts have upheld criminal convictions of senior officials because they consciously screened themselves from matters which they had the power to prevent or correct.

Civil Liability

Under Federal and State law, agency executives can be personally liable for damages to persons or property as a result of lack of care. In general, Federal employees acting within the scope of their official duties are shielded from personal civil liability; however, the agency that the employees work for can be fined. When violations of environmental compliance are discovered, the proper course of action is to immediately inform the proper regulatory authority and begin corrective action immediately.

Additional information regarding facility compliance, liability issues, and the enforcement process may be found in the EPA’s *Yellow Book*. This book describes the enforcement strategy for Federal facilities. The EPA also has extensive information resources, services, and products available to Federal personnel. *Access EPA* is a series of directories that allow for easy access to the EPA’s repository of environmental information. The Computer-Aided Environmental Legislative Data System (CELD) is the best source for current information on legislation and

regulations. The system contains environmental compliance abstracts and is written in an informal narrative style.

Emergency Action

Every agency must prepare for environmental emergencies and must alert the public to potential hazards that exist at its facilities. The Emergency Planning and Community Right-to-Know Act (EPCRA), also known as SARA Title III, was enacted to encourage and support emergency planning for responding to chemical accidents and to alert the public and local governments with information about possible hazards in their communities. A crisis response team must be established to react to environmental emergencies. The size of the team will depend upon the activity of the facility. A written plan must be developed that documents the members of the response team, specific training requirements, special equipment to support operations, and proposed response times. If the crisis team interfaces with the community, then lines of authority must be defined in the plan.

In order to administer and implement a successful environmental management program, agency executives need to keep abreast of environmental laws and regulations. Many of today's key environmental issues such as global warming, ozone depletion, and acid rain are specifically addressed in Federal legislation. This section introduces the requirements of some Federal laws which profoundly impact the environmental compliance activities of civilian Federal agencies.

Federal Requirements

Until 1970 environmental law focused on research, preservation, and conservation. During the 1970's the first set of modern environmental laws appeared, establishing the Environmental Protection Agency and creating a structure for combating pollution with standards based on the amount of pollutants. In the 1980's the emphasis shifted to technology-based standards and on the more toxic pollutants. In the 1990's the following trends have become apparent which are of concern to executives:

- Changes in the Federal and State roles are likely to increase State participation in the enforcement and administration of environmental regulations.
- Major amendments of national environmental laws will occur, and the number and complexity of implementing regulations will continue.
- Regulations will move away from command-and-control approaches to economic incentives.
- Increasing incorporation of environmental concerns into governmental decision-making processes, and increasing involvement of the public in operations affecting the environment and public health, safety, and welfare.
- More prosecution and conviction of Federal employees for violation of environmental law.

The following outlines the major environmental statutes which impact Federal facilities.

CERCLA and SARA

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly referred to as the Superfund Act, confers extensive authority on the Federal government to respond to the release of hazardous substances or other pollutants that represent an imminent or substantial danger to the environment. It also allows private parties to conduct a cleanup and then recover the costs from responsible parties or from a Hazardous Substances Superfund.

The most important power established by CERCLA allows the Federal government to order or take response actions. Response actions include removal or other remedial action for hazardous substances. Removal actions are immediate actions taken primarily to bring a release under control. Remedial actions are meant to be permanent and thorough responses and specifically exclude off-site removal. Remedial actions normally involve on-site treatment of the release and may involve permanent relocation of residents, businesses, and facilities.

Federal remedial or removal actions must be consistent with the National Contingency Plan (NCP) mandated by CERCLA. The NCP is the chief body of regulations governing how the law is to be carried out. The cleanup actions must also be cost-effective. In choosing a remedial action, the Federal government prefers methods of treatment that permanently and significantly reduce the volume, toxicity, or mobility of hazardous substances. Off-site removal and disposal is the least favored alternative.

The Federal government must take certain steps before adopting a remedial action plan. The first step involves publishing a written notice of the plan and making it available for public review. The second step is to provide reasonable opportunity for the submission of written and oral comments, and an opportunity for a public meeting near the site. Third, the Federal government must publish the significant differences between the final remedial action plan, and any actual remediation action that may be adopted instead.

Superfund Amendments and Reauthorization Act (SARA) revised CERCLA and extended the Superfund authorization. Title III of SARA contains a piece of freestanding legislation entitled the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). The EPCRA establishes emergency planning, reporting, and notification requirements meant to protect

the public in the event of a release. SARA also specifically addresses hazardous waste cleanup at Federal facilities and creates a Federal agency hazardous waste compliance docket which lists facilities that manage hazardous waste or have hazardous waste problems.

Releases and Reporting

CERCLA requires that facilities, private or governmental, report releases of hazardous substances exceeding threshold amounts, called reportable quantities (RQ's), which occur during any 24 hour period to the National Response Center in Washington, D.C. The act also requires owners and operators of facilities to provide reasonable notice to potentially injured parties by publication in a local newspaper.

Under Title III of SARA, owners and operators of facilities which produce, use, or store hazardous chemicals must immediately report certain releases of CERCLA hazardous substances and SARA extremely hazardous substances to both the State emergency response commission (SERC) and the local emergency planning committee (LEPC). The act also requires owners and operators of facilities that manufacture, import, process or otherwise use certain quantities of toxic chemicals to submit annual reports indicating the quantity of the chemicals released into the environment. Facilities must maintain Material Safety Data Sheets (MSDS) and provide an annual chemicals inventory form for all chemicals present in excess of threshold planning quantities established by the act.

Potentially Responsible Parties

CERCLA establishes broad liability for potentially responsible parties (PRP's) that have caused hazardous substance problems. The parties are obligated to reimburse the Superfund and the States for the following costs; actual cleanup expenses, natural resources damages, response costs borne by other parties consistent with the National Contingency Plan, the costs of health studies authorized under the act, and interest charges. CERCLA does not impose liability for response costs or damages for releases permitted under any other provisions of Federal laws.

As a result of SARA, Federal agencies are expressly subject to the provisions of CERCLA in the same manner and extent as any private party. Federal agencies may be sued. The act allows any person to bring civil enforcement suits against facilities, EPA, State and local agencies, and officials for violations. The EPA itself, however, may not sue another Federal agency and will not generally levy monetary penalties against Federal facilities.

Resource Conservation And Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments

RCRA, an amendment to the Solid Waste Disposal Act of 1965, was enacted in 1976. RCRA creates a framework for the proper management of hazardous and non-hazardous solid waste. It does not address problems of hazardous waste encountered at inactive or abandoned sites or those resulting from spills requiring emergency response. The goals of RCRA are to: protect human health and the environment, to reduce waste and conserve natural resources, and to reduce the generation of hazardous waste.

The term "solid waste" includes not only traditional non-hazardous waste, such as municipal garbage, but also hazardous solid waste. The term "solid" also applies to liquid and gaseous forms of waste. The following materials are not considered solid waste under RCRA: domestic sewage, industrial wastewater discharges, irrigation return flows, and nuclear materials.

Solid Waste Management

RCRA requires Federal agencies with jurisdiction over a solid waste facility, or those engaged in disposal activities, to comply with all Federal, State, interstate, and local requirements for permits. Each Federal agency is also directed to procure items composed of the highest percentage of recoverable or recyclable materials that is practicable.

Regulation of non-hazardous waste is the responsibility of the States. The program for solid waste is implemented primarily at the State and local level. Federal involvement is limited to establishing minimum criteria for controls and monitoring requirements for disposal facilities.

Hazardous Waste Management

Hazardous wastes are defined as a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause an increase in mortality or illness, or pose a substantial hazard human health or the environment. The EPA has established standards to identify hazardous waste under RCRA according to the following characteristics: ignitable, corrosive, reactive, and toxic.

If a waste mixture contains both a hazardous waste and a non-hazardous waste it is classified as hazardous and must be managed accordingly. Certain solid wastes such as mining waste are exempted from consideration as hazardous waste. RCRA is designed to halt the improper management of hazardous waste by tracking the movement of waste from the point of generation to the point of final treatment, storage or disposal. Generators must document that hazardous waste they produce is properly identified and transported to a RCRA permitted treatment, storage, or disposal facility (TSDF). Generators are the facility owners or operators who first create the waste. The Uniform Hazardous Waste Manifest (shipping paper) is the document that generators use to track the waste. All parties handling the waste receive a copy of the manifest which identifies the quantity, composition, origin, routing, and destination of the hazardous waste.

Generator Status, Transporter Standards, and TSDF Permits

Treatment, storage, or disposal of any hazardous waste is prohibited in most cases except in accordance with a permit. A generator is allowed to store hazardous waste on-site without a RCRA storage permit in only two circumstances. First, the generator can accumulate up to 55 gallons of hazardous waste near the point of generation in satellite accumulation areas (SAA's). Second, the generator can store wastes on-site up to 90 days in tanks or containers provided certain conditions (secondary containment, personnel training, contingency planning, and emergency response) are met. Small quantity generators, who produce between 100 and 1000 kg of waste per month, may accumulate up to 6000 kg of on-site waste for a period of 180 days without a permit. Very small generators, those that produce less than 100 kg per month, are still conditionally exempt from RCRA.

A transporter is anyone who moves a hazardous waste by air, rail, highway or water. The only persons not covered by transporter standards are generators or TSDF's that engage in on-site transportation of their waste. Transporters may hold waste for up to ten days at a transfer facility without obtaining a RCRA storage permit. Transporters are required to keep the manifest with the waste at all times. Treatment, storage, and disposal facilities must obtain an operating permit from the EPA or the State. Permits can only be issued to facilities that comply with EPA standards. A permit is required before construction of a TSDF.

Spills and Releases

The general difference between RCRA and CERCLA is that the former authorizes management of wastes while the latter authorizes cleanup responses whenever there is a release of wastes including spills or leaks. The corrective actions authorized by RCRA parallel the remedial, or cleanup, actions of CERCLA. Both laws authorize the EPA to act in the event of an imminent hazard.

As a result of the Hazardous and Solid Waste Amendments (HSWA) of 1984, the EPA requires as a condition of any permit for a treatment, storage, or disposal facility, that corrective actions be taken for all releases of hazardous wastes, regardless of when the waste was placed in

the unit. Owners and operators of underground storage tanks (UST's) are also required to respond to any actual or suspected leaks by investigating, cleaning up, and reporting the leak to the implementing agency. Within 24 hours of confirmation of a release the owners and operators must report the release, take action to prevent further release, and take actions to safeguard against immediate hazards such as fires and explosions. UST's are discussed further below.

Underground Storage Tanks (UST's)

The changes to RCRA as a result of the HSWA were designed to control and prevent leaks from UST's. The HSWA creates a comprehensive program for UST's which is administered by the EPA. The program cover all aspects of tank ownership and operation: notification of State agencies of the existence of tanks; design, construction, and installation; repair and closure; performance standards for new tanks; upgrade of existing tanks; corrective actions in the event of a leak or spill (discussed above); and financial responsibility of owners and operators for taking corrective and compensating third parties for damages. The program puts great emphasis on enforcement of UST regulations by State and local agencies.

Medical Wastes

A new section was added to RCRA with the enactment of the Medical Waste Tracking Act of 1988. Medical waste is defined as any solid waste generated in the diagnosis, treatment, or immunization of humans or animals in research, production, or testing.

The EPA has established a demonstration program that tracks the shipment and disposal of medical wastes in a selected number of States. The framework is similar to that established for hazardous wastes. Medical wastes are to be segregated, if practicable, at the point of generation. All Federal facilities located within the designated demonstration States must comply with all applicable permitting and reporting requirements.

Clean Water Act

The Clean Water Act (CWA), officially entitled the Federal Water Pollution Control Act, was originally enacted in 1972. It has been amended by major provisions in 1977, 1981, and 1987. The principal objective of the act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

The act creates a regulatory framework designed to protect surface water quality by controlling or preventing the discharge of pollutants from point sources to these waters. (The definition of pollutant is very broadly defined under the law, and includes virtually all waste material. Point source is defined as a discernible, concrete conveyance.) The basic provisions of the act include the establishment of national discharge limitations, water quality standards, a permit program, provisions for oil and toxic substance spills, and a publicly-owned treatments works (POTW) construction grant program. Federal facilities must comply with all requirements of the act.

The CWA sets mandatory minimum requirements for regulatory programs, but States are encouraged to take over the administration and enforcement of the programs. If the States are delegated the authority for the program, they have considerable flexibility in the means of meeting the minimum requirements, and they may impose stricter requirements if they so choose.

Wastewater

The main element of the CWA is the National Pollutant Discharge Elimination System (NPDES) which is either administered by the EPA or by a State regulatory agency. The permit system requires a permit for beginning or continuation of discharge of pollutants to surface waters. It also basically defines the permissible level of release of pollutants into water bodies for the individual discharger. Discharge of dredge and fill materials into surface waters, and activities in wetlands, are regulated through a separate permit process administered by the United States

Army Corps of Engineers.

Three approaches are used to determine permissible levels at the point of discharge: First, the discharge can be treated to the limits of available technology. Second, the discharge may be restrained so that the receiving body of water maintains a specific quality. Third, the discharge may be limited as necessary to protect health and the environment, as in the case of toxic substances in the discharge.

Spills and Spill Prevention

The NPDES permit system is effective for discharges that can be anticipated, predicted, and controlled, however, it is not useful in dealing with accidental spills. The CWA requires Spill Prevention, Control and Countermeasures (SPCC) plans for facilities with specified quantities of oil storage. These plans consist of both infrastructure and procedures. Infrastructure could include installation of berms, dikes, culverts, or warning systems. Procedures include developing Spill Contingency and Countermeasures Plans (SCCP's) and adequately training personnel

The CWA requires facility owners or operators to notify the National Response Center, which is run by the Coast Guard, if there is a discharge of a harmful quantity of oil or a reportable quantity of a hazardous substance. In practice, any discharge of oil to water bodies must be reported. The EPA has designated approximately 300 substances as hazardous.

Stormwater

One of the most important provisions of the 1987 amendments to the CWA, known as the Water Quality Act, created a new program to control non-point (diffuse) source pollution. The act makes clear when and where permits are required for the discharge of stormwater into surface waters. The amendments require permits for stormwater discharges from industrial facilities. Industrial facilities must comply with permit requirements within three years after a permit is issued.

Oil Pollution Act (OPA)

The Oil Pollution Act (OPA), enacted in 1990, amended the CWA concerning oil spills by expanding the authority of the Federal government to direct and manage oil spill cleanup operations. The OPA made prevention of spills, removal of pollutants, and restoration of the environment high priorities of the CWA programs by providing strong enforcement tools and adequate funding. The Federal government may merely direct cleanup actions or may assume responsibility and costs of the cleanup subject to reimbursement by responsible parties. Further implementation of this act will be brought about through regulations issued by the United States Coast Guard.

Safe Drinking Water Act (SDWA)

The Safe Drinking Water Act (SDWA), was enacted in 1974 and was significantly amended in 1986. Its objective is to protect the nation's drinking water and protect public health to the maximum extent possible. The act requires the EPA to set maximum contaminant levels (MCL's) necessary to protect public health. The levels were established in regulations issued pursuant to the act which requires the EPA to develop regulations for the protection of underground sources of drinking water. The act also requires any underground injection of wastewater to be authorized by a permit and restricted the use of lead in drinking water distribution systems. States are given primary enforcement responsibility for protecting drinking water supplies and implementing EPA regulations.

Clean Air Act

The Clean Air Act (CAA) was first enacted in 1955 to protect human health and the environment from pollution. The act has been amended several times in intervening years, most recently in 1990. Each set of amendments broadened the Federal role.

The core of the CAA is the National Ambient Air Quality Standards (NAAQS) program. The NAAQS program establishes standards for six pollutants that are mainly responsible for pervasive air pollution problems: ozone, chlorofluorocarbons (CFC's), particulate matter, carbon monoxide, sulphur dioxide, nitrogen oxides, and lead. Besides generally applicable air quality standards and control technology requirements, the CAA also addresses specific pollution problems such as air toxics emissions, acid rain, visibility degradation, CFC emissions, and mobile source emissions. Federal agencies are subject to all Federal, State, interstate, and local air pollution requirements to the same extent as private parties. The NAAQS are implemented by State Implementation Plans (SIP's).

State Implementation Plans

The CAA gives States the primary responsibility for the maintenance of air quality at a level consistent with the NAAQS. This is accomplished through source specific requirements in State Implementation Plans (SIP's). The SIP is a constantly evolving regulatory document that is modified as Federal requirements and local conditions change. The States are responsible for developing SIP's. The plans must be submitted to the EPA for approval. If a State fails to submit a plan, or submits an inadequate plan, the EPA will promulgate a Federal Implementation Plan (FIP) for the State.

Clean Air Act Amendments of 1990

The Clean Air Act Amendments (CAAA) tighten pollution control requirements in cities that have not attained Federal air quality standards. Key provisions are aimed at bringing cities and other areas with ozone, carbon monoxide or particle pollution into line with the standards. The amendments require stricter auto emissions standards, mandate cleaner gasoline, and call for the introduction of clean-fueled vehicles in the nation's most polluted cities. The amendments also phase out production of chemicals that deplete the ozone in the stratosphere, and increase the emphasis on innovative, market-based regulatory approaches to reducing pollution. Finally, the amendments add a comprehensive operating permit program to concentrate all of the CAA requirements that apply to a given source of pollution.

State Permit Programs

Before the 1990 amendments, the CAA did not require operating permits for industrial plants or businesses, though most States required permits for some air pollution sources. The amendments require State and local air pollution agencies to submit permit programs to the EPA for approval. If the State fails to submit an adequate program, the EPA will implement the program in that State.

Control of New Pollution Sources

The CAA requires the EPA to identify new sources by industrial category that contribute significantly to air pollution which endangers public health or welfare. The EPA must set emission standards for these sources. The standards are termed New Source Performance Standards (NSPS). New sources of air pollution are subject to more stringent levels control than existing sources. Permitting requirements depend on whether the source is located in an area that has attained (an attainment area), or not attained (a non-attainment area) the NAAQS for the pollutant in question. Sources of pollution located in an attainment area are subject to a Prevention of Significant Deterioration Program (PSD). New air pollution sources in non-attainment must receive a non-attainment permit.

Mobile Sources

The CAA establishes emission limitations for hydrocarbons, carbon monoxide, nitrous

oxides, and particulates from new motor vehicles. The act also controls lead additives in gasoline. The Clean Air Act Amendments establish a program to promote development and use of clean-fueled vehicles. The program will require a percentage of new vehicles to be added to fleets in approximately 25 ozone or carbon monoxide non-attainment areas. The amendments also mandate the use of cleaner reformulated gasoline in the nine large ozone non-attainment areas. Finally, it raises tailpipe emission standards for new cars and trucks.

Ozone Depleting Substances

The Clean Air Act Amendments will phase out the production of several chemical compounds that are destructive to the ozone in the stratosphere. These chemicals include CFC's, halons, carbon tetrachloride, and methyl chloroform. The EPA issues regulations that limit the use and emissions of these chemicals and stipulates requirements for recycling and disposal. The replacement of any ozone depleting substance (ODS) is prohibited if an alternative that is less risky has been identified by the EPA.

Toxic Substances Control Act (TSCA)

The purpose of the Toxic Substances Control Act (TSCA) is to regulate chemical substances that are hazardous to human health or the environment. The act also authorizes control over chemical substances that pose an unreasonable risk to human health or the environment. A chemical substance is defined in the act as any organic or inorganic substance of a particular molecular identity. Thus, the provisions of the TSCA apply not only to pure chemical substances but also to impurities, incidental reaction products, contaminants, co-products, and trace materials.

The EPA administers and enforces the TSCA. The regulatory authority given to the EPA is broad: authority to require testing of chemicals which may present a significant risk or which are produced in substantial quantities or result in substantial human or environmental exposure; premanufacture review of new chemical substances prior to their production and introduction into commerce; authority to limit or prohibit manufacture, use, distribution, and disposal; recordkeeping and reporting requirements; and export notices and import certifications.

The TSCA was amended in 1986 by adding a new title, the Asbestos Hazard Emergency Response Act (AHERA). AHERA requires the EPA to establish a regulatory framework for abatement responses to asbestos-containing materials in schools. AHERA also requires the EPA to conduct a study to determine the extent of danger to human health presented by asbestos in public and commercial buildings, and how to respond to such danger. In 1990, the act was amended again. The Asbestos School Hazards Abatement Re-authorization Act (ASHARA) of 1990 requires accreditation for any person who inspects for asbestos containing material (ACM) in a public or commercial building, or who designs or conducts a response action with respect to friable ACM in such a building

Testing of Chemical Substances

The TSCA does not require the EPA to test every chemical. The EPA orders testing of chemical substances that are believed to present an unreasonable risk to human health or the environment, or that creates extensive exposure of humans or the environment where there is sufficient information to assess the chemical. The act established the Interagency Testing Committee (ITC) to make recommendations to the EPA regarding substances that should be accorded testing priority. The act requires the ITC to give priority to substances suspected of causing cancer, gene mutations, and birth defects.

National Chemical Inventory

The EPA is required to compile an inventory of chemicals made or processed in the United States. The list, known as the TSCA Inventory, is to include all substances contained in

reports sent to the EPA. A substance not on the list is considered a new chemical substance, and is subject to premarket notification (PMN) requirements before production begins.

Premarket Notification

The TSCA requires manufacturers and processors of chemicals, with some exceptions, to provide advance notice of manufacture or processing of any new chemical substance, or any chemical substance being put to a significant new use. The act requires manufacturers in these circumstances to notify the EPA 90 days in advance of commercial production.

Hazardous Substance Restrictions

If the EPA determines that the manufacture, processing, distribution, disposal, or use of a chemical substance will present an unreasonable risk to health or the environment, it can invoke the hazardous substance rule. The EPA may prohibit or limit the production and distribution of a substance altogether or for a particular use or for a particular use in a concentration imposed by the EPA. This is the EPA's most extreme regulatory power. To date, the EPA has regulated only a handful of chemical substances under this rule: asbestos, polychlorinated biphenyls (PCB's), chlorofluorocarbons (CFC's), dioxin, hexavalent chromium, and some metal-working fluids.

Asbestos Regulation

As required by AHERA, the EPA completed a study in 1988 on asbestos-containing materials (ACM) in public buildings. The report recommended a program to address existing hazards in public and commercial buildings. States have taken the initiative in this area. Most States have enacted asbestos legislation that includes provision for certification of asbestos inspectors and workers, performance standards, disposal methods, and liability. State asbestos laws generally apply to all types of buildings, not just schools.

National Environmental Policy Act (NEPA)

Enacted in 1969, the National Environmental Policy Act (NEPA) applies to all Federal agencies and to every major action taken by them that significantly affects the quality of the environment. NEPA requires Federal agencies to consider the affects of proposed actions on the environment. NEPA created the Council on Environmental Quality (CEQ), which is a Federal agency in the Executive Office of the President, to analyze and develop national environmental policy. The CEQ also issues regulations that implement the law.

NEPA is a process. The law requires Federal agencies to prepare detailed statements before commencing major actions affecting the environment. CEQ regulations require agencies to solicit appropriate information and comment from the public at various points in the process. Each Federal agency has its own procedures for incorporating NEPA's requirements into its decision-making process.

In the first phase of the NEPA process, the lead Federal agency proposing the action conducts an environmental review of the proposed action to determine whether significant environmental impacts are anticipated and whether changes can be made to the proposed action to eliminate these impacts. An environmental review determines whether a proposed action can be exempted from the environmental assessment (EA) or environmental impact statement (EIS).

If an EA is required, and the outcome indicates that no significant environmental impacts are anticipated, a Finding of No Significant Impact (FONSI) is issued. If significant impacts are possible, an EIS must be prepared and filed with EPA. Conditions which would prompt the preparation of an EIS might include: land use changes, adverse effects on wetlands, actions affecting threatened or endangered species or their habitats, or actions adversely affecting a flood plain, parklands, or recreational areas.

The EIS process provides for involvement by the public and other agencies in the decision making process by informing individuals of the environmental consequences of the proposed

action, providing the opportunity to present comments, and possibly assisting in developing alternatives to the proposed action.

Federal, Insecticide, Fungicide, and Rodenticide Act (FIFRA)

The Federal, Insecticide, Fungicide, and Rodenticide Act (FIFRA) was originally enacted in 1947 primarily as a pesticide labeling law. It has been amended several times since then, most notably in 1972 and 1978. Registration is now the cornerstone of FIFRA because in order to approve the registration of a pesticide for public commerce, the EPA must find that the pesticide will not adversely affect the public health or the environment. States are given primary responsibility for the enforcement of pesticide violations.

The EPA classifies pesticides for general or restricted use. If a pesticide is classified for restricted use, the pesticide can only be applied by, or under the supervision of, EPA-certified applicators. A State may assume the responsibility to certify pesticide applicators if the EPA has approved a plan for applicator certification.

Implementing an Environmental Management Program

Where to Start

Attend Environmental Coordinator briefings : These briefings will help you determine your agency's compliance status. From the discussion, try to determine how and to what degree the present program is woven into daily operations and if it is accepted as a part of normal operations.

Conduct Environmental Team meetings : These are excellent forums to present your ideas and thoughts on how the program supports and enhances operations. More importantly, they can provide a good indicator of how the program is being executed and warn you of future problems. To realize the full potential of these meetings, encourage group interaction and generate input from lower level employees.

Attend and encourage staff briefings on environmental issues and operations : Your attendance at these meetings will be a clear indicator that the care of the environment is an important issue. Listen for new, innovative ideas and positive things that are being done to preserve the environment. Assess the impact that environmental considerations have on operations.

Review past records and files : Review documentation such as inspection and audit reports, financial reports, memos, letters, orders, media articles, etc. Evaluate both positive and negative trends, successes and failures, and look for ideas that can be used for future.

Tour the facility and area : There is no substitute for frequent walking tours of the facility and area. During these tours, discuss the program with the workers. Look and ask questions. Question procedures that look unusual, unsafe, illegal, etc. Ask to see references and documentation that support these operations or procedures. As a general rule, if something does not look right or sound right, it probably is not right.

Visit other agencies and facilities : A visit to view other programs in action is an excellent source of knowledge and information to gather ideas for your program. Ask for a copy of the environmental management plan and any other documentation that supports the program. Take key members of your staff along on the visit. A firsthand view is the most effective way to educate your staff. Take the ideas and lessons learned from the visit and use them in your program.

Environmental questions : Review the questions in the back of this guide for ideas prior to conducting a visit or attending a briefing.

Appendix A: Environmental Acronyms

ACM	Asbestos Containing Material.
AHERA	Asbestos Hazard Emergency Response Act.
ARPA	Archeological Resources Preservation Act.
CAA	Clean Air Act of 1970.
CAAA	Clean Air Act Amendments.
CEQ	Council on Environmental Quality.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act.
CFC	Chlorofluorocarbon.
CWA	Clean Water Act.
EA	Environmental Assessment.
EIS	Environmental Impact Statement.
EPCRA	Emergency Planning and Community Right-to-Know Act.
FFCA	Federal Facilities Compliance Act.
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act.
FIP	Federal Implementation Plan.
FONSI	Finding of No Significant Impact.
FWPCA	Federal Water Pollution Control Act.
HAP	Hazardous Air Pollutant.
HMTA	Hazardous Materials Transportation Act.
HSWA	Hazardous and Solid Waste Amendments.
LEPC	Local Emergency Planning Committee.

Appendix A: Environmental Acronyms

LQG	Large Quantity Generator.
MCL	Maximum Contaminant Level.
NAAQS	National Ambient Air Quality Standards.
NCP	National Contingency Plan.
NEPA	National Environmental Policy Act.
NESHAP	National Emission Standards for Hazardous Air Pollutants.
NHPA	National Historic Preservation Act.
NOV	Notice of Violation.
NPDES	National Pollutant Discharge Elimination System.
NPL	National Priorities List.
NSPS	New Source Performance Standard.
OPA	Oil Pollution Act.
PCB	Polychlorinated Biphenyls.
POTW	Publicly-Owned Treatment Works.
PPA	Pollution Prevention Act.
PSD	Prevention of Significant Deterioration Program.
PRP	Potentially Responsible Parties.
RCRA	Resource Conservation and Recovery Act.
RAP	Remedial Action Plan.
ROD	Record of Decision.

Appendix A: Environmental Acronyms

SARA	Superfund Amendments and Reauthorization Act.
SDWA	Safe Drinking Water Act.
SIP	State Implementation Plan
SPCC	Spill Prevention Control and Countermeasures.
SWDA	Solid Waste Disposal Act.
TSCA	Toxic Substances Control Act.
TSDF	Treatment, Storage, and Disposal Facilities.
UST	Underground Storage Tank.
VOC	Volatile Organic Compounds.

Appendix B: Environmental Terms

404 Permit - a required document administered by the COE under the CWA regulating discharge of fill and dredged materials into surface waters.

A-106 - OMB Circular A-106, issued December 31, 1974, provided procedures to be followed by Federal agencies in preparing the Federal Agency Pollution Abatement Plans. For current procedures see **Fed Plan**.

Acid Rain - precipitation with a high concentration of acid resulting in acidification of lakes and destruction of forests, believed to be caused by emissions from vehicles and burning fossil fuels.

Administrative Action - non-judicial enforcement action taken by Federal or state regulatory agencies to force compliance.

Administrative Order - orders issued directly under the authority of a law imposing enforceable legal duties.

Asbestos Hazard Emergency Response Act of 1986 - requires studies to determine the extent of danger to human health from asbestos in public and commercial buildings.

Asbestos - a group of natural minerals that tend to separate into strong, heat-resistant fibers and is a carcinogen.

Attainment Area - defined under the CAA as a region which has attained the National Ambient Air Quality Standards.

Auditing - the process of determining whether all levels of a facility are in compliance with statutory and regulatory requirements and internal standards and procedures; also called self-appraisal, self-evaluation, or self-monitoring.

Best Management Practice - a common sense approach when dealing with a known process. It takes into account operating and process conditions by minimizing the impact on the environment and human health.

Clean Air Act Amendments of 1990 - designed to prevent, control, and abate air pollution from stationary and mobile sources.

Appendix B: Environmental Terms

Carrying Capacity (Wildlife) - the maximum density of wildlife that a particular area or habitat will support on a sustained basis without deterioration of the habitat.

Categorically Excluded - a category of actions which have been predetermined not to have significant environmental effects, and which do not require an EA or an EIS.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 - also referred to as the Superfund Act.

Chlorofluorocarbon - family of fully halogenated hydrocarbons containing fluorine and chlorine. The substances are thought to deplete the earth's stratospheric ozone layer.

Compliance - a facility's status with regard to environmental laws, regulations, and internal standards.

Compliance Agreement - similar to a Consent Order, except that it is used where the EPA does not have statutory or administrative authority.

Consent Order - the primary enforcement response of the EPA to formalize bilateral agreements between EPA and a Federal agency to ensure return of a facility to compliance.

Critical Habitat - a designated area declared essential for the survival of a protected species under authority of the Endangered Species Act.

Clean Water Act (1972-1987) - regulates discharge of wastewater from industrial facilities and sewage treatment facilities such as publicly owned treatment works.

Discharge - defined by the CWA as the addition of pollutants to surface waters.

Environmental Assessment - defined under NEPA as the determination of the threshold level of significance of the effects of the proposed actions of a Federal agency on the environment.

Effluent - defined by the CWA as treated or untreated liquid discharge.

Environmental Impact Statement - detailed study required under NEPA before any Federal agency proceeds with actions that might have significant effects on the environment.

Appendix B: Environmental Terms

Endangered Species Act (1973) - protects threatened and endangered species and the ecosystems upon which those species depend.

Enforcement Action - civil or administrative action by Federal or state environmental regulatory agencies.

Emergency Planning and Community Right-to-Know Act of 1986 - provides local governments with information about possible chemical hazards in the community; also known as SARA Title III.

Facility - defined by OMB Circular A-106 as buildings, installations, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property owned by, constructed, or manufactured, or leased to the Federal government. *Note that each statute can have its own variation of the term “facility.”*

Federal Facilities Hazardous Waste Compliance Docket - is a list of Federal facilities which manage hazardous waste or from which hazardous substances may have been released. Section 120(c) of the CERCLA requires EPA to update the docket every six months.

Federal Food, Drug, and Cosmetic Act of 1938 - governs pesticide residue levels in food or feed crops.

Federal Insecticide, Fungicide, and Rodenticide Act of 1972 - regulates the licensing or registration of pesticides.

Fed Plan - Executive Order 12088 requires Federal agencies to prepare an annual plan for the control of environmental pollution. These plans and their review and analysis by EPA is referred to as FedPlan.

Finding of No Significant Impact - a determination by an EA under NEPA that a proposed Federal action will have no significant effects on the environment and implies that an environmental impact statement is not needed.

Friable Asbestos - asbestos which can be crumbled in the hand and creates a health hazard due to release of microscopic fibers.

Appendix B: Environmental Terms

Halons - halogenated hydrocarbons containing bromine which are thought to deplete the earth's stratospheric ozone layer.

Hazardous Air Pollutant - defined under the CAA as a pollutant which causes an increase in mortality or serious illness.

Hazardous Material - chemicals determined by the Secretary of Transportation to present risks to safety, health, and property during transportation.

Hazardous Substance - defined under CERCLA as those substances which when released in to the environment present substantial danger to the public health or welfare or the environment.

Hazardous Waste - defined under RCRA as a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause an increase in mortality and illness or pose a substantial hazard to human health and the environment when improperly disposed of.

Hazardous and Solid Waste Amendments of 1984 - amendments to RCRA which include regulations on waste minimization, land disposal of hazardous wastes, and underground storage tanks.

Inspection - formal, usually prearranged, visits by representatives of Federal or state regulatory agencies with the purpose of collecting information and data on the compliance status of a facility.

Knowing Endangerment - a legal term used to define crimes under most environmental laws; defined to be when a defendant has knowledge, or should have knowledge, of a situation or subject which endangered life, health, or public welfare.

Leachate - liquid material produced when surface water or groundwater contacts solid waste; typically generated at landfills.

LEPC - Local Emergency Planning Committee, established in local municipalities to prepare a plan for responding to releases of hazardous substances and informing citizens of those major facilities managing hazardous substances in the area.

Appendix B: Environmental Terms

Large Quantity Generator - defined under RCRA as a generator producing over 1000 kg per month of hazardous waste or over 1 kg of acutely hazardous waste per month.

Maximum Contaminant Level - defined under the SDWA as the allowable level of organic and inorganic constituents in drinking water.

Medical waste - solid waste generated in the diagnosis, treatment, or immunization of human beings or animals in research, production, or testing.

National Ambient Air Quality Standards - these standards set criteria under the CAA for six air pollutants that are responsible for pervasive air pollution.

National Primary Drinking Water Regulations - establish the maximum contaminant levels for certain chemicals in drinking water to protect public health.

National Secondary Drinking Water Regulations - guidelines for contaminants which affect the aesthetic qualities of water.

National Response Center - the Washington D.C. headquarters (run by the U.S. Coast Guard) that coordinates activities relative to pollution emergencies.

National Contingency Plan - regulations which implement CERCLA provisions for responding to releases of oil and hazardous substances including cleanup of NPL sites.

National Environmental Policy Act of 1969 - requires all federal agencies to take into account environmental effects of proposed major actions through preparation of EAs or EISs.

National Emission Standards for Hazardous Air Pollutants - allowable emissions of certain hazardous pollutants into ambient air.

Notice of Intent - used to notify the public of a proposed project and describes the environmental considerations given; the public is then permitted time for comment before action can occur.

Notice of Noncompliance - written notice from state or Federal regulatory agencies warning of the state of noncompliance with environmental laws and regulations at a facility, and requiring corrective action.

Appendix B: Environmental Terms

Noise Control Act of 1972 - regulates noise emissions from commercial products such as transportation and construction equipment.

Nonattainment Area - defined under the CAA as a region which has not attained the NAAQS.

Noncompliance - the state of not being in compliance with environmental laws or regulations.

Nonpoint Source - defined under the CWA as a diffuse source of pollution.

Notice of Violation - initial written notice from the EPA requiring response to address significant violations.

National Pollutant Discharge Elimination System - a permit system established by the CWA controlling discharges into surface waters.

National Priorities List - a list of sites, required under CERCLA, ranked to receive resources and funds for cleanup activities.

New Source Performance Standard - technology based emission standards promulgated under the CAA.

Occupational Safety and Health Act of 1970 - established the Occupational Safety and Health Administration which is responsible for regulating worker safety. It establishes guidelines and training requirements for workers at hazardous wastes sites.

Point Source - an identifiable discrete source of air pollution.

Pollutant - definition under the CWA includes dredged soil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, clear dirt, and industrial, municipal, and agricultural waste discharged into water.

Pollution Abatement Plans - plans required by Executive Order 12088 and described by the Office of Management and Budget (OMB) Circular No. A-106; Federal agencies must submit the plans semi-annually in a standard format to the EPA for review. See A-106 plans.

Appendix B: Environmental Terms

Prevention-Based Planning - planning which promotes compliance in the first instance before violations occur.

Primary Standards - standards related to the protection of public health.

Prevention of Significant Deterioration Program - a program under the CAA to prevent backsliding of regions that have achieved the NAAQS.

Resource Conservation and Recovery Act of 1976 - established guidelines and standards for hazardous waste generation, transportation, treatment, storage, and disposal.

Remedial Action Plan - strategy for correcting a site or operation which is not in compliance with regulatory requirements.

Regional Response Center - the federal regional site that controls pollution emergency response activities.

Release - defined under CERCLA as spilling, pumping, pouring, emitting, discharging, injecting, leaking, dumping or disposal into the environment.

Remedial Action - defined under CERCLA as an activity that involves permanent remedies or long-term cleanup solutions.

Remediation - Clean up of a toxic or hazardous waste site.

Removal - defined under CERCLA as an immediate action taken to bring a release under control.

Record of Decision - a document, required under the NEPA process, which identifies the decision of a Federal agency, and explains why the decision was made, regarding the alternatives discussed in an EIS; also a step in the cleanup of a contaminated site under CERCLA.

Superfund Amendments and Reauthorization Act of 1986 - establishes standards for cleanup activities and also stipulates the conditions for off-site disposal of waste.

Safe Drinking Water Act of 1974 - sets drinking water standard for any pollutants that may have an adverse affect on human health or negatively affect the aesthetic quality of drinking water.

Appendix B: Environmental Terms

Secondary Standards - standards not directly related to human health, they are related to aesthetics, smell and beauty.

State Implementation Plan - the plan is developed by a state authority and specifies the manner in which air quality standards mandated by the CAA will be achieved, and is the chief instrument for exercising state authority under the act.

Solidification - a process of stabilizing waste materials to prevent migration of contaminants.

Solid Waste - defined under RCRA as nonhazardous and hazardous solid waste whether liquid, solid, semi-solid, or gaseous.

Spill Prevention Control and Countermeasures Plan - document which inventories oil and hazardous substance storage and provides procedures used to prevent spills and releases of these products.

Superfund - the account established by the Superfund Act; officially titled the Hazardous Substances Superfund.

Solid Waste Disposal Act of 1965 - any discernible waste management unit at a RCRA facility from which hazardous constituents might migrate, irrespective of whether the unit was intended for the management of liquid and/or solid waste.

Toxic Pollutant - defined under the CWA as a pollutant that will cause death, disease, cancer, or physical deformities in organisms.

Toxic Substances Control Act of 1976 - regulates PCBs, CFCs, asbestos; requires testing of chemical substances entering the environment and regulating releases where necessary.

Treatment, Storage, and Disposal - hazardous waste operations requiring permits defined under RCRA.

Treatment, Storage, and Disposal Facilities - defined under RCRA as facilities involved in hazardous waste operations.

Appendix B: Environmental Terms

Underground Storage Tank - below or in-ground tank, storing oil or hazardous substances, regulated under RCRA.

Yellow Book - the EPA Federal Facilities Compliance Strategy.

Appendix C: Questions To Ask

General

Does the facility have an Environmental Management Plan?

When was last time the plan was reviewed?

How is the plan integrated into the operational plan for the facility?

What restoration or remediation projects are in progress?

Environmental Compliance

What is the current compliance status?

How does the audit program work?

What Notice of Violations (NOVs) have been received in the last year?

What NOVs are still outstanding? What is being done about them?

Is the facility currently operating under Compliance Agreements or Consent Orders?

When are the next scheduled inspections of the facility?

What EPA Form-7's are in process?

What is the status of our Crisis Response team?

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Have procedures been developed for notification of the National Response Center, US Coast Guard, EPA regional office, and appropriate state agencies in the event of a release of a hazardous substance?

Is any facility listed on the National Priorities List (NPL)?

What stage have cleanup programs or projects reached?

Is an Administrative Record of all actions for the program or projects maintained and available to the public as required by the National Contingency Plan (NCP)?

Have community relations plans been developed?

Appendix C: Questions To Ask

How does the facility participate in community activities and planning?

How does the public relations program support the environmental program?

How does the facility participate in local, regional, or state emergency planning activities?

Has information concerning the types and quantities of hazardous substances used and stored been provided to local authorities?

Resource Conservation and Recovery Act (RCRA)

How much hazardous waste is generated by the facility annually?

What are the hazardous waste disposal costs?

What is the status of Hazardous Waste Management Plan?

What percent of hazardous waste is expected to be reduced in the current year?

Where is the hazardous waste disposal site?

What is the status of corrective actions for leaking storage tanks?

Are there any current corrective action requirements?

Are personnel handling hazardous waste in accordance with Federal and state requirements?

Have enough funds been allocated to handle, store, transport, treat and dispose of hazardous waste per applicable Federal, state, and local requirements?

What types of solid waste facilities are being used?

Has a recycling plan been established?

Clean Water Act (CWA)

Is waste water discharged to a publicly-owned treatment works (POTW) or Federally-owned treatment works (FOTW)?

Are Spill Prevention Control and Countermeasures Plans (SPCCs) current?

Are Spill Contingency Plans current?

Appendix C: Questions To Ask

Are there discharges which may require permits, such as storm water outfalls?

Safe Drinking Water Act (SWDA)

Have lead mitigation measures for drinking water been implemented?

Do operations inject fluids that may affect ground water supplies?

Clean Air Act (CAA)

What is the attainment status of the area ?

How many permitted point sources are located in the facility?

Has the facility ensured that motor vehicles and other mobile sources comply with emission standards?

Are transportation control measures as required by State Implementation Plans in effect?

What is the plan to handle the reduction in CFCs (elimination of freon from cooling systems)?

Toxic Substances Control Act (TSCA) and the Indoor Radon Abatement Act

Have inspections for asbestos containing materials, and tests for radon been completed?

How are asbestos abatement and the corresponding temporary displacement of personnel being managed?

Do any buildings require asbestos removal or radon mitigation measures?

Have polychlorinated biphenyl's (PCB's) and PCB items been identified, marked, inspected, and the risk assessed?

National Environmental Policy Act (NEPA)

Is the NEPA process initiated early enough in the planning process to avoid significant cost or delays due to redesign?

What agency actions typically require Environmental Impact Statements (EISs)?

Appendix C: Questions To Ask

Are the required Finding of No Significant Impact (FONSI) or Record of Decision (ROD) for projects in progress or scheduled on file?

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

Have the required state and local permits been obtained and are they on file?

Have Pest Management Plans been implemented?