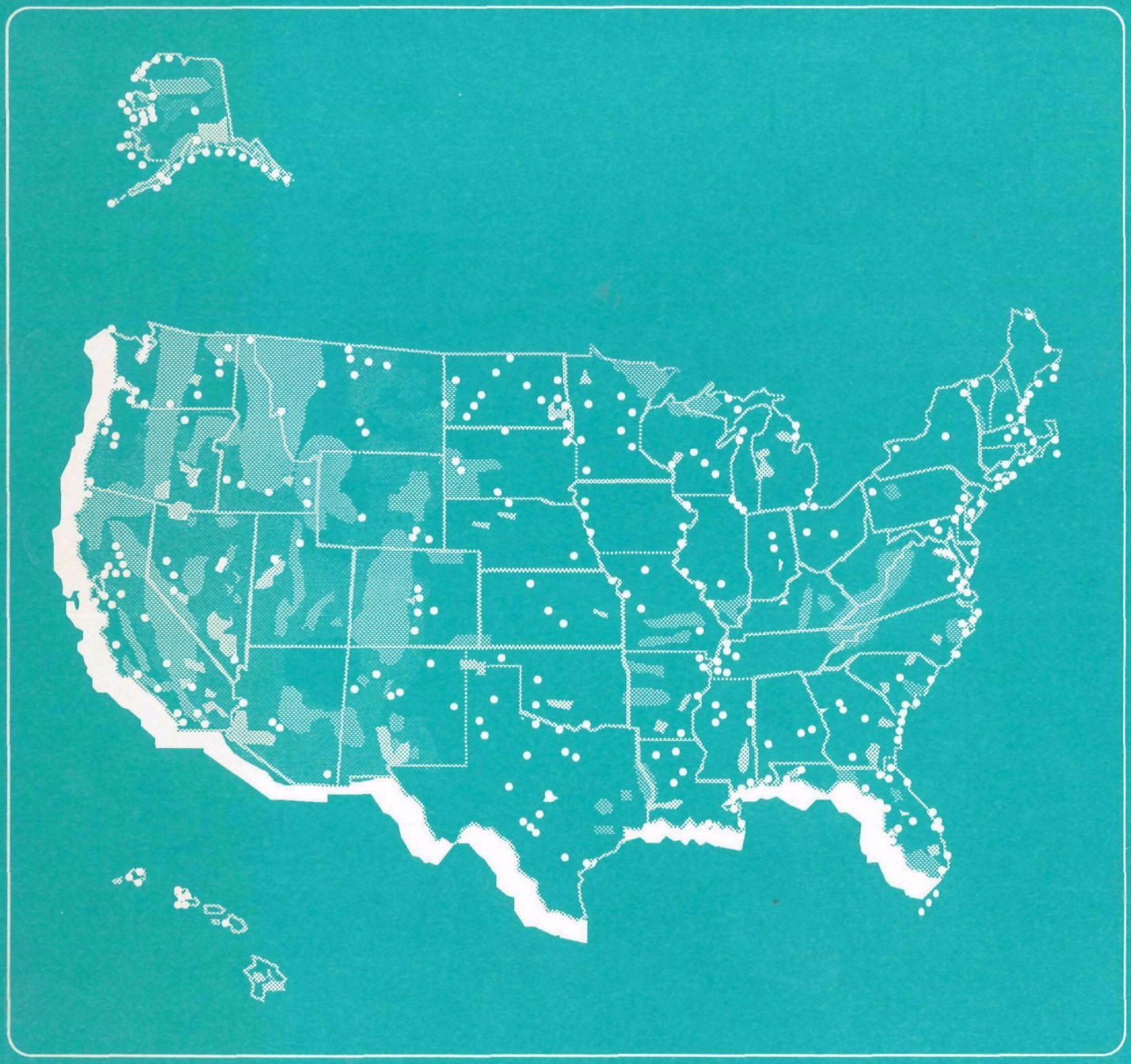
United States
Environmental Protection
Agency

Office of
Federal Activities
Washington, D.C.

EPA/130/4-89/002
August 1989

EPA

Generic Protocol for Environmental Audits at Federal Facilities



OFFICE OF FEDERAL ACTIVITIES
U.S. ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

Generic Protocol for Environmental Audits at Federal Facilities

AUGUST 1989

Printed on Recycled Paper

NOTICE

This protocol was prepared with assistance from Booz.Allen & Hamilton Inc under two contracts, a draft under Contract Number 68-01-7378 and a final under Contract Number 68-W8-0097, for the Office of Federal Activities, U.S. Environmental Protection Agency. Mr. James R. Edward was the EPA Project Manager. The purpose of this document is to provide technical assistance for environmental compliance auditing at Federal facilities and is intended as a guide for auditing such facilities. Due to variations in facility operations or other circumstances, this protocol may require additions or modifications. Neither Booz.Allen & Hamilton Inc, nor the U.S. Environmental Protection Agency make any guarantee or assume any liability with respect to the use of any information or recommendations contained in this protocol. Federal facilities requiring additional auditing information or advice should consult a qualified professional.

In addition, the information and recommendations set forth herein are intended as guidance to Government employees. It does not constitute rulemaking by the EPA, and may not be relied on to create a substantive or procedural right or benefit enforceable by any other person.

ACKNOWLEDGEMENTS

This protocol was developed by James R. Edward of the Office of Federal Activities, U.S. Environmental Protection Agency, and Barbara M. Young of Booz, Allen and Hamilton Inc, Bethesda, Maryland. It is a pleasure to acknowledge the assistance of the following EPA staff who kindly provided technical review: Kathy Hutson, Office of Federal Activities; Lee Braem, Office of Enforcement and Compliance Monitoring; and Tapio Kuusinen, Office of Policy Planning and Evaluation. Booz, Allen and Hamilton staff included Cynthia Salisbury, Lisa Ice, Ted Yoder and Donald Gensler.

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INTRODUCTION

GENERIC PROTOCOL FOR ENVIRONMENTAL AUDITS AT FEDERAL FACILITIES

TABLE OF CONTENTS

		Page Number
CHAPTER 1.	**INTRODUCTION**	
	Auditing Assistance to Federal Agencies	1-1
	Objective of Environmental Auditing Protocols	1-2
	Scope	1-2
	Contents	1-3
	Instructions	1-4
CHAPTER 2.	**AUDIT PROCEDURES**	
	Preliminary Overview	2-1
	Gathering Audit Information	2-3
	Evaluating and Reporting	2-3
CHAPTER 3.	**AIR**	
	Federal Statutes	3-1
	Applicability	3-2
	Regulatory Scope Regulatory	3-2
	State and Local Regulatory Authority	3-3
	Selected Management Considerations	3-3
	Agency Policy	3-4
	Source List	3-5
	Checklist	3-6
CHAPTER 4.	**ASBESTOS**	
	Federal Statutes	4-1
	Applicability	4-1
	Regulatory Scope	4-1
	State and Local Regulatory Authority	4-2
	Selected Management Considerations	4-2
	Agency Policy	4-3
	Source List	4-4
	Checklist	4-5

CHAPTER 5. **DRINKING WATER**

Federal Statutes 5-1
Applicability 5-1
Regulatory Scope 5-2
State and Local Regulatory Authority 5-3
Selected Management Considerations 5-3
Agency Policy 5-4
Source List 5-5
Checklist 5-6

CHAPTER 6. **WATER POLLUTION**

Federal Statutes 6-1
Applicability 6-1
Regulatory Scope 6-1
State and Local Authority 6-3
Selected Management Considerations 6-3
Agency Policy 6-4
Source List 6-5
Checklist 6-6

CHAPTER 7. **NONHAZARDOUS SOLID WASTE**

Federal Statutes 7-1
Applicability 7-1
Regulatory Scope 7-1
State and Local Regulatory Authority 7-2
Selected Management Considerations 7-2
Agency Policy 7-3
Source List 7-4
Checklist 7-5

CHAPTER 8. **HAZARDOUS WASTE**

Federal Statutes 8-1
Applicability 8-1
Regulatory Scope 8-2
State and Local Authority 8-3
Selected Management Considerations 8-4
Agency Policy 8-4
Source List 8-5
Checklist 8-6

CHAPTER 9. **UNDERGROUND STORAGE TANKS**

Federal Statutes 9-1
Applicability 9-2
Regulatory Scope 9-2
State and Local Authority 9-2
Selected Management Considerations 9-3
Agency Policy 9-3
Source List 9-4
Checklist 9-5

CHAPTER 19. **ENVIRONMENTAL MANAGEMENT SYSTEMS**

Purpose..... 19-1
Environmental Compliance Program Questionaire..... 19-2

APPENDIX A EPA's ENVIRONMENTAL AUDITING POLICY STATEMENT

APPENDIX B LIST OF STATE AGENCIES AND ADDRESSES

APPENDIX C PRE-AUDIT QUESTIONNAIRE USED BY U.S. EPA, ENVIRONMENTAL HEALTH AND SAFETY DIVISION

APPENDIX D CLEAN AIR ACT: NEW STATIONARY SOURCES FOR POLLUTION

ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-containing Materials
AEA	Atomic Energy Act
AHERA	Asbestos Hazardous Emergency Response Act of 1986 (Title II of TSCA)
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
DOT	Department of Transportation
CWA	Clean Water Act
ECC	Environmental Compliance Coordinator
ECP	Environmental Compliance Program
EIS	Environmental Impact Statement
EO	Executive Order
EP	Extraction Procedure
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EUP	Experimental Use Permit
FNSI	Finding of No Significant Impact
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FR	Federal Register
FWS	Fish and Wildlife Service
GSA	General Services Administration
HSWA	Hazardous and Solid Waste Amendments (1984 RCRA Amendments)
kg/mo	Kilogram per Month
LEA	Local Education Agencies
LLW	Low-level waste
LLWPA	Low-level Waste Policy Act
MCL	Maximum Concentration Level
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act of 1966
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NSPS	New Source Performance Standards
NVLAP	National Voluntary Laboratory Accreditation Program
NWPA	Nuclear Waste Policy Act
OFA	Office of Federal Activities
OMB	Office of Management and Budget
OPPE	Office of Policy and Program Evaluation
PCBs	Polychloronated biphenyls
POTW	Publicly Owned Treatment Works
PPM	Parts per million
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1987

SDWA	Safe Drinking Water Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SPCC plan	Spill Prevention Control and Counter Measure Plan
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TSDFs	Treatment, Storage, and Disposal Facilities
UIC	Underground Injection Control
UMTRCA	Uranium Mill Tailings Radiation Control Act
UST	Underground Storage Tank

CHAPTER 1

INTRODUCTION

Auditing Assistance to Federal Agencies

This *Generic Protocol for Environmental Audits at Federal Facilities* is a supplement to earlier efforts by EPA to provide technical assistance to Federal agencies on environmental auditing. EPA's Office of Federal Activities (OFA) issued the *Federal Facility Compliance Strategy* (referred to as the "Yellow Book"), prepared in 1984 and revised in 1988, as a framework for EPA's media programs to follow to ensure that Federal facilities are fully integrated into Federal and State compliance monitoring and enforcement activities. In the executive summary of the Yellow Book, Lee Thomas, former EPA Administrator, states the goal of EPA as helping to "...ensure that Federal agencies achieve compliance rates in each media program which meet or exceed those of major industrial and major municipal facilities."

In 1986, EPA issued the Environmental Auditing Policy Statement (see Appendix A). The policy encourages Federal agencies to voluntarily develop comprehensive auditing programs to ensure environmental compliance. A comprehensive auditing program may have many, if not all, of the seven elements identified in the policy statement . In addition to this effort, EPA hosted an environmental auditing conference for Federal agencies in March 1988 and issued bibliographies on environmental auditing and management (Annotated Bibliography on Environmental Auditing, March 1988; Annotated Bibliography on Environmental Management, March 1988).

EPA's Environmental Auditing Policy Statement

On July 9, 1986, EPA issued a formal Environmental Auditing Policy Statement in the *Federal Register* which encouraged all regulated entities -- private, municipal and Federal -- to adopt environmental auditing programs. The policy statement stresses that although Federal law does not require regulated entities to implement an auditing program, the ultimate responsibility for environmental performance of the entity lies with top management. This gives managers a strong incentive to use means such as auditing to secure reliable information on the environmental compliance of facilities which they own or operate.

In the policy statement EPA defines environmental auditing as "... a systematic, documented, periodic and objective review by regulated entities of facility operations and practices related to meeting environmental requirements." Such a review can lead to higher levels of environmental compliance and reduced risk to human health and the environment. The EPA policy specifically endorses environmental auditing at Federal facilities and recommends auditing programs which promptly identify problems and implement corrective actions. In addition, EPA promises to provide technical assistance to Federal agencies concerning the design and initiation of such a program to the extent feasible.

Executive Order 12088

Signed by President Carter on October 13, 1978, the purpose of Executive Order 12088 is to ensure Federal government compliance with applicable pollution control standards. The order conveys the responsibility for compliance to the head of each executive agency. Agencies must comply with all substantive and procedural requirements of Federal, State and local environmental regulations. Agencies are encouraged to consult EPA, State, interstate and local agencies in the

prevention, control, and abatement of environmental pollution. EPA, in turn, is required by this Executive Order to provide technical advice and assistance to ensure compliance by Federal agencies.

Executive Order 12088 also requires executive agencies to submit to the Office of Management and Budget (OMB), through EPA, an annual plan for the prevention control, and abatement of pollution. This plan is part of the process required by OMB Circular A-106, "Reporting Requirements in Connection with the Prevention, Control and Abatement of Environmental Pollution of Existing Federal Facilities," dated December 31, 1974. The form must include annual cost estimates for any environmental projects planned at Federal facilities. The head of each agency must ensure that sufficient funds for compliance with pollution control standards are requested; and subsequently, funds appropriate for the prevention, control and abatement of environmental pollution are used for the intended purpose. Environmental auditing can be an effective tool for identifying needed projects to be included in Federal agencies' A-106 plans.

Objective of Environmental Auditing Protocols

OFA has developed the *Generic Protocol for Environmental Audits at Federal Facilities (Generic Protocol)* to assist Federal agencies in designing environmental audit protocols for use in conducting internal audits at their facilities. The *Generic Protocol* may serve as a guide for audits conducted by teams drawn from environmental compliance staff and other appropriate personnel within each agency. They provide detailed step-by-step instructions which agencies may modify to meet the individual needs and operations at their facilities.

Federal agencies in varying stages of audit program development can use this document. The protocol is a valuable starting point to those agencies with no audit protocol. Additionally, for those agencies with only a partial protocol covering only select media, this document will ease the development of a comprehensive audit protocol. Finally, for those agencies with a comprehensive working auditing program, this document will provide a means to verify or improve the quality of the existing protocol. Because this protocol is written with the entire universe of Federal agencies in mind, it is generic and may need to be supplemented in light of the relative complexity of operations within different Federal agencies.

OFA has concurrently developed a companion document entitled *Environmental Audit Program Design Guidelines for Federal Agencies*. It is intended to assist an agency's headquarters personnel in assembling a workable environmental auditing program, while the *Generic Protocol* provides tools to collect compliance data at the field level once a program is in place. The *Design Guidelines*, although prepared for use by all Federal agencies, will be especially useful to those designing a new auditing program. Both the *Design Guidelines* and the *Generic Protocol* are intended to assist Federal agencies in their pursuit of compliance with environmental regulations. Such assistance is required by EPA's Environmental Auditing Policy Statement (51 FR 25004) and Executive Order 12088 as discussed above.

Scope

The auditing protocols in this document are multipurpose: they are intended to address all environmentally significant operations at Federal facilities. The media and issues covered in the protocol include:

- Air
- Asbestos
- Drinking water
- Water
- Nonhazardous waste
- Hazardous waste

- Underground storage tanks
- Past disposal of hazardous materials
- Emergency planning and community right-to-know
- PCBs
- Pesticides
- Radioactive materials
- Environmental noise
- Natural resources
- Cultural resources
- Environmental impact documentation
- Environmental management systems.

It is important to note that this document covers primarily Federal regulations developed pursuant to applicable Federal environmental statutes. Federal citations provided in the auditors' checklists may have exceptions which are too lengthy and site-specific to list in full. Auditors must review these regulations in the Code of Federal Regulations in order to verify the full extent of compliance. The checklist also must be revised periodically to reflect changes in environmental laws and regulations.

The document, in addition, address the applicability of State and local regulations only to the extent that significant differences frequently observed between the Federal and corresponding State regulations are highlighted. A successful environmental audit can not be conducted without considering State and local regulations. Since this document only addresses Federal regulations, auditors are instructed to insert relevant State and local regulations at the appropriate locations in this document. In order to assist auditors in obtaining copies of their States' regulations, Appendix B contains a list of State environmental agencies, addresses and phone numbers. If there is a particular program of concern, it is best to get copies of the State law and regulations.

Contents

This documents includes 19 chapters, each focusing on a critical area of the environmental audit. The first chapter highlights the purpose, scope and organization of the protocol. Chapter 2 gives a brief outline of audit activities, including pre-audit preparation, conduct of the audit and reporting procedures. The environmental issues to be addressed during an audit are discussed in the following chapters:

Chapter 3 Air
Chapter 4 Asbestos
Chapter 5 Drinking Water
Chapter 6 Water Pollution
Chapter 7 Nonhazardous Solid Waste
Chapter 8 Hazardous Waste
Chapter 9 Underground Storage Tanks
Chapter 10 Past Disposal of Hazardous Materials
Chapter 11 Emergency Planning and Community Right-to-Know
Chapter 12 PCBs
Chapter 13 Pesticides
Chapter 14 Radioactive Materials
Chapter 15 Environmental Noise
Chapter 16 Natural Resources
Chapter 17 Cultural Resources
Chapter 18 Environmental Impact Documentation
Chapter 19 Environmental Management Systems

Instructions

Each chapter, with the exception of Chapter 19, Environmental Management Systems, is organized into the following eight subparts:

- Federal Statutes -- Reviews the applicable Federal environmental laws for the issue involved.

- Applicability -- Describes operations and activities at Federal facilities which potentially may be regulated.

- Regulatory Scope -- Addresses specific Federal regulations as of March 1989, with which subject facilities must comply. Pending regulations (those proposed in the *Federal Register)* are also addressed.

- State and Local Regulatory Authority -- Gives specific examples for those areas where more stringent State regulations are common.

- Selected Management Considerations -- Provides recommended practices that management personnel may adopt to increase environmental compliance. The activities addressed are not required by Federal statutes or regulations.

- Agency Policy -- Instructs auditors to identify and insert applicable policies from their respective agencies.

- Audit Information Source List -- Provides a quick reference list for audit team members of records to review, physical features to inspect, and people to interview.

- Auditors' Checklist -- Provides a step-by-step worksheet to be used by audit team members in conducting the audit. Each worksheet is divided into four columns. The first column is the citation of a Federal regulatory requirement. The second column provides instructions to the auditor. The third column is for the auditors' comments. In the forth column, the auditor gives each finding a unique notation that is to be determined by the agency. This is designed to encourage early classification of findings, a topic discussed in more detail in the *Design Guidelines*.

These subparts provide generic information that will be useful to all Federal agencies. Chapter 19 is provided to evaluate the environmental management systems in place at Federal facilities. Although this chapter goes well beyond the typical compliance assessment, it is an integral part of internal environmental audits. Information considered important but beyond the scope of the chapters is provided in several appendices listed in the Table of Contents.

AUDIT PROCEDURES

CHAPTER 2

AUDIT PROCEDURES

This chapter outlines audit procedures, including audit preparation, data gathering and reporting. Exhibit 2-1 outlines the three phases of a typical audit at a Federal facility with special emphasis on the auditor's use of protocols provided in the following chapters. A description of each phase is provided below.

Preliminary Overview

The preliminary overview is the first phase of the audit. The audit team will be sufficiently prepared at the conclusion of the preliminary overview to evaluate environmental compliance and management systems at the facility. It includes the following activities:

- Pre-audit Questionnaire -- Before the audit team arrives at the facility, a pre-audit questionnaire is sent to the environmental compliance coordinator. An example of a questionnaire used by U.S. EPA's Environmental Health and Safely Division is provided in Appendix C. The facility environmental compliance coordinator usually completes the questionnaire and returns it to the audit team two to four weeks prior to an audit.

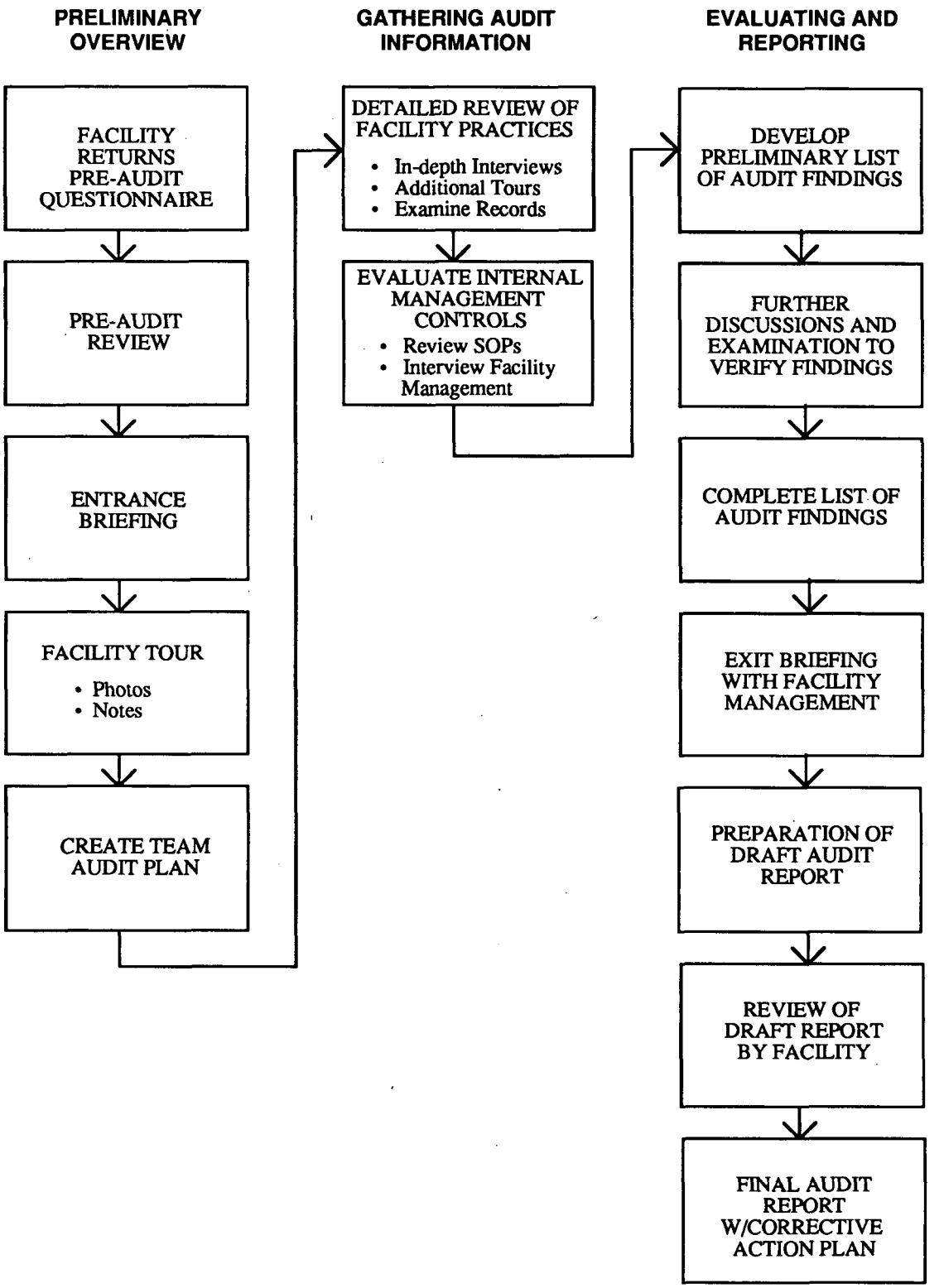
- Pre-audit Review -- Based on the questionnaire, the audit team determines the activities that are subject to regulations. The corresponding chapters in this protocol are identified and the auditors' checklists reviewed. Applicable State regulations and agency policies are obtained and reviewed. Compliance manuals, standard operating procedures, past audit or inspection reports and facility layout maps returned with the questionnaire are also important to review.

- Entrance Briefing -- The purpose of the entrance briefing is to inform facility personnel of the audit program's objectives, scope, approach and the expected schedule of activities. The audit team members can also become familiar with individuals responsible for environmental compliance at this time and answer their questions.

- Facility Tour -- The facility tour will vary with the size, number and diversity of operations. The main objective of the tour is for auditors to become familiar with the physical plant and potential sources of pollution. It is most efficient to examine each area of the facility in an integrated fashion rather than as separate categories or media, such as air, water or hazardous waste. The source lists in Chapters 3 through 18 are used to focus attention to areas to be visited during the tour. Auditors should note those areas which will require a return visit for a more detailed inspection.

- Create Team Audit Plan -- After completing the previous four steps, the audit team will have a basic understanding of the processes and areas of concern. With this information, the team divides the work load and plans the remainder of the audit. Each member of the team may take charge of a category or medium, such as hazardous waste or air, or the work can be divided by building.

EXHIBIT 2-1
SCHEMATIC OVERVIEW OF THE AUDIT PROCESS



Gathering Audit Information

The next phase of the audit requires extensive review of facility documents and return visits to specific areas of the facility. It includes the following activities:

- Detailed Review of Facility Practices -- The audit team conducts detailed interviews with on- and off-site personnel, make additional tours, and examine records. The team should review the auditors' checklist provided in Chapters 3 through 18.

- Evaluate Internal Management Controls -- The team gains an understanding of how environmental pollution is controlled. This includes understanding the facility's programs, procedures and staff responsibilities for each category or medium covered.

Evaluating and Reporting

After orienting themselves and gathering data from records and interviews, the audit team compiles their results by comparing the data to the regulatory requirements. This phase includes the following activities:

- Develop Preliminary List of Audit Findings -- For each category or medium investigated, a list of findings is compiled which includes a description of the condition and the regulation violated. If the audit includes management assessment, these recommendations also are listed.

- Further Discussions and Examinations to Verify Findings -- The findings are discussed among the audit team members and with the environmental compliance coordinator to verify the conditions noted.

- List of Audit Findings -- Once the findings are verified, a final list of preliminary findings is prepared for presentation at the exit briefing.

- Exit Briefing with Facility Management -- The audit team enumerates preliminary findings at the exit briefing. The facility management raises any conflicts they have with the audit team findings. Any differences are discussed and ,if possible resolved, Outstanding issues are documented and may need follow-up action after the exit briefing.

- Preparation of Draft Audit Report -- Written results of the audit are drafted by the audit team after leaving the facility. Findings and recommendations may be sorted by major categories or media to help structure the audit report and set priorities for resolving problems.

- Review of Draft Report By Facility -- The draft report may be reviewed and edited by the audited facility before it is in final form.

- Final Audit Report with Corrective Action Plan -- The final report is distributed to a predetermined audience. The report includes a plan for correcting the deficiencies and the length of time necessary to correct the problem.

AIR

CHAPTER 3

AIR

Federal Statutes

The Clean Air Act, enacted in 1970 and amended in 1977, is the Federal statute mandating the prevention and control of air pollution from both stationary and mobile sources. The Clean Air Act (CAA) requires EPA to establish three types of national standards: National Ambient Air Quality Standards; New Source Performance Standards; and National Emission Standards for Hazardous Air Pollutants.

National Ambient Air Quality Standards (NAAQS) establish the allowable ambient concentrations for six priority pollutants:

- Total suspended particulates
- Sulfur dioxide
- Nitrogen oxide
- Carbon monoxide
- Ozone
- Lead

NAAQS apply to pollutant concentrations in ambient air, and are not applicable to individual emission sources. For this reason, compliance with these standards is not an issue directly addressed during an environmental audit. The CAA, however, mandates that States must develop State Implementation Plans (SIPs) which regulate emissions from stationary and mobile sources to ensure attainment and maintenance of the NAAQS.

There are statutory provisions concerning the construction and modification of stationary sources in areas where air quality is better than that required by NAAQS. These provisions are intended to prevent significant air quality degradation in these areas. The "prevention of significant deterioration" (PSD) regulations establish strict preconstruction guidelines and monitoring requirements. For construction or modification of sources in non-attainment areas (NAA), where one or more NAAQS are not met, there are similar strict regulations for preconstruction review, emission control systems and monitoring.

New Source Performance Standards (NSPS) were developed for specific industrial categories to provide a ceiling for emissions from new sources (Appendix D). They are based on application of the best technology available to reduce emissions. These standards include requirements for notification, recordkeeping, performance tests, maintenance and monitoring.

National Emission Standards for Hazardous Air Pollutants (NESHAPs) were established to control air pollutants for which no ambient air quality standards are applicable and which may result in an increase in mortality or serious irreversible illness. These standards define emission limits, monitoring requirements, restrictions on material use, worker practice standards and reporting requirements for hazardous air pollutants. Facilities emitting the following pollutants must comply:

- Asbestos
- Benzene
- Beryllium
- Coke oven emissions
- Inorganic arsenic
- Mercury
- Radionuclides
- Vinyl chloride

Many additional pollutants are likely to be added to this list of hazardous air pollutants.

Applicability

Section 118 of the CAA requires Federal facilities to comply with all Federal, State, interstate and local requirements pertaining to air pollution. Federal facilities must comply with all of the standards and regulations described above.

Federal facilities with one or more of the industrial sources listed in 40 CFR Part 60 must comply with the NSPS only if the operations were constructed after the date the applicable standards were proposed. A full list of these industrial operations and the dates the standards were proposed is included in Appendix D. A total of 53 industrial operations are now affected by New Source Performance Standards.

Federal facilities that handle, process, dispose or emit the hazardous air pollutants regulated by NESHAPs must be aware of the regulations set forth in 40 CFR Part 61. Many other substances are currently being considered for inclusion in the list of hazardous air pollutants; many of these substances are suspected carcinogens.

A Federal facility must comply with PSD regulations if it is located in an area of designated attainment for at least one criteria pollutant (i.e., sulfur dioxide, particulate matter, carbon monoxide, ozone, nitrogen oxide, lead) and fulfills one of these conditions below:

- A stationary source specifically listed in 40 CFR Part 52.21(a) which emits, or has the potential to emit, 100 tons per year or more of any pollutant subject to regulation under the CAA

- A stationary source which emits, or has the potential to emit, 250 tons per year or more of any air pollutant subject to regulation under the CAA.

The NAA regulations apply to major sources constructed in areas of non-attainment for one or more criteria air pollutants that emit, or have the potential to emit, 100 tons per year of a pollutant subject to regulation under the CAA.

Regulatory Scope

Federal regulations pursuant to the CAA are codified in 40 CFR Parts 50 through 80. The regulatory requirements applicable to operations at Federal facilities are outlined below:

- National Ambient Air Quality Standards (40 CFR 50) -- NAAQS set national permissible ambient levels for sulfur oxides, particulate matter, carbon monoxide, ozone, nitrogen oxide and lead. State and local agencies may adopt more stringent levels than those set forth here.

- State Implementation Plan (40 CFR Parts 51-52) -- SIP regulations describe the methods EPA uses to approve State air pollution control programs. The State programs implement the air pollution regulations.

- Ambient Monitoring Methods (40 CFR Part 53) -- details reference and equivalent methods approved by EPA for monitoring ambient air pollutants.

- Nonferrous Smelters (40 CFR Part 57) -- sets forth standards applicable to the operators of nonferrous smelters.

- New Stationary Source (40 CFR Part 60) -- sets standards applicable to over 50 types of industrial operations. The operations covered are listed in Appendix D. States may set more stringent standards for these industrial operations.

- Emission Standards for Hazardous Air Pollutants (40 CFR Part 61) -- sets national emission standards for asbestos, beryllium, mercury, vinyl chloride, benzene, radionuclides and arsenic. State and local agencies may promulgate more stringent emission standards for these pollutants.

Because States enforce regulations pursuant to the CAA, it is imperative that all Federal facilities are aware of the State and local air pollution control regulations in their areas, in addition to the Federal requirements listed above.

State and Local Regulatory Authority

The CAA specifies that the States must enforce the pollution abatement requirements for existing and new sources. This includes the NSPS, NESHAP, PSD and NAA regulations described above. States are free to develop more stringent regulations than those proposed by EPA, but cannot lower Federal Standards. Any facility emitting air pollutants must be familiar with the applicable State regulations.

Many States regulate operations not addressed in the Federal regulations. For example, some States require that fume hoods have permits, while others do not. Additionally, at least one State requires that every air pollution control device (e.g., HEPA or carbon filters) be permitted by the State. Several States require that facilities submit or "register" a list of every air pollutant they emit with the appropriate State agency. These examples illustrate that it is imperative that facilities review their State regulations for applicability to individual operations.

Several States also have local air pollution regulations. Facilities should consult local authorities (e.g., County Board of Health, County Environmental Agency) to find out if there are local regulations in their area. Regional regulations are occasionally found, especially if the region is a non-attainment area. Facilities should check for regional regulations as well.

Selected Management Considerations

Agency management is responsible for ensuring conformance with Federal, State, local and regional air emission standards and for initiating timely requests for permit amendments and renewals. The following actions can improve compliance:

- Establish and implement procedures for obtaining, evaluating and maintaining a current file on relevant air emission standards.

- Establish and maintain a tickler file of permit-related milestones.
- Develop standard operating procedures requiring modifications to existing equipment and proposals for new air emission sources to be reviewed for permit compliance/conformance with air emission standards that can minimize instances of non-compliance.

Agency management should be aware that operation of an air emissions source may involve compliance issues with other environmental regulations besides air emission standards. The following actions can improve compliance with these regulations:

- The use of a materials balance approach for air emission sources can provide documentation necessary to determine applicability of other environmental regulations. Boiler blow-down, for example, will probably be regulated under the National Pollutant Discharge Elimination System provision of the Clean Water Act, while disposal of collected fly ash is frequently regulated by the Resource Conservation and Recovery Act (RCRA).

- Disposal of filters used to remove, clean contaminants from air emission source exhausts may be regulated by RCRA because of the nature of the contaminants collected by the filter.

Air emissión sources should be included in Federal agency management's waste minimization practices. For example, increasingly costly disposal of contaminants from air exhaust streams may justify modification to or replacement of existing air emission source equipment.

Agency Policy

Insert applicable agency policies here.

AUDIT INFORMATION SOURCE LIST

AIR

Activity: Air

Records to Review:

- State and local air pollution control regulations
- Agency air pollution control regulations
- Emissions inventory
- All air pollution source permits
- Plans and procedures applicable to air pollution control
- Emission monitoring records
- Opacity records
- Notifications of violations to regulatory authorities
- Instrument calibration and maintenance records
- Reports/complaints concerning air quality
- Air Emergency Episode Plan
- State and/or Federal regulatory inspections.

Physical Features to Inspect:

- All air pollution sources
- Air pollution monitoring and control devices
- Air emission stacks
- Air intake vents.

People to Interview:

- Operators of sources
- Stack testers
- Maintenance personnel
- Records clerks.

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	State Implementation Plans:		
40 CFR 51 and 52/ State Regulations	Authority to enforce the requirements pursuant to the Clean Air Act has been delegated to the States. The facility should be aware of and comply with State air pollution control regulations. A current copy of the State air pollution control regulations should be on site.		
	New Stationary Source Performance Standards		
	Any Federal facility with a source listed in Appendix D of this document that has been constructed/modified subsequent to the "proposal date" also listed in Appendix D complies with the following applicable standards set forth in the Federal and/or State regulations:		
40 CFR 60	• The appropriate regulatory authority (i.e., State agency) is notified of construction, reconstruction, initial startup, physical or operational change that results in an increase in the emission rate, opacity observation information and excess emissions.		
	• A report is prepared showing the results of performace tests within 180 days after initial start-up.		
	• Facility maintains monitoring systems and monitoring devices required for specific source category.		

Activity: Air

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• Facility complies with emission standards for regulated pollutants such as sulfur dioxide, particulate matter, carbon monoxide, ozone, nitrogen dioxide and lead. • Facility monitors operations and maintains records of operations as required for specific source category. • Reference test methods and procedures are used as required for specific source category.		
40 CFR 61/ State Regulations	**National Emission Standards for Hazardous Air Pollutants (NESHAP):** States have the authority to implement and enforce national emission standards for hazardous air pollutants. A copy of the State air pollution control regulations should be on site.		
61.08/ State Regulations	• Facility obtains approval from appropriate regulatory authority (i.e., State agency) prior to constructing/modifying stationary source potentially emitting hazardous air pollutant(s).		
61.09/ State Regulations	• The appropriate regulatory authority is notified prior to start-up of source potentially emitting hazardous air pollutant(s).		
61.12/ State Regulations	• Facility operates source in a manner consistent with good air pollution control practices for minimizing emissions.		

Activity: Air

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
61.14/ State Regulations	• Emission tests are performed as required by applicable regulations and/or permit requirements.		
61.14/ State Regulations	• Facility operates monitoring system in a manner consistent with good air pollution control practices for minimizing emissions.		
State/ Local Regulations	• Emissions of the following pollutants do not exceed limitations set forth in State or local regulations: - Asbestos - Benzene - Beryllium - Coke oven emissions - Inorganic arsenic. - Mercury - Radionuclides		

ASBESTOS

CHAPTER 4

ASBESTOS

Federal Statutes

Requirements pertaining to asbestos are included in regulations promulgated pursuant to the Clean Air and Toxic Substances Control Acts.

The Clean Air Act (CAA) Amendments of 1970 required EPA to establish National Emissions Standards for Hazardous Air Pollutants (NESHAPs). In 1971 EPA listed asbestos as a hazardous air pollutant and subsequently established emission standards for the manufacturing, fabrication, spray application, waste packaging, labeling and disposal of asbestos. The Act also establishes standards for asbestos emissions during renovation and demolition projects.

The Toxic Substances Control Act (TSCA) of 1976 was amended in 1986 by the Asbestos Hazard Emergency Response Act (AHERA). AHERA regulations require local education agencies to inspect their school buildings for asbestos containing materials and take appropriate actions to control release of asbestos fibers. This includes schools on Federal facilities.

Applicability

The CAA regulations apply where emissions of asbestos fibers occur. Federal facilities must comply with CAA requirements specified in CAA Section 118. Facilities that mill, manufacture, fabricate, land dispose or spray apply asbestos are subject to emission control regulations. Buildings constructed with asbestos-containing materials (ACM) could trigger coverage under NESHAPs in the event of any renovation or demolition involving these building materials. NESHAPS require that the EPA Administrator be notified when removal or demolition projects will involve significant amounts of asbestos. The standards also include procedures for asbestos emission control during these projects.

Agencies operating educational facilities are subject to TSCA asbestos-in-schools regulations. TSCA mandates that Federal facilities must comply with its requirements. Classrooms, dormitories and all education-related office buildings (excluding childcare facilities) require asbestos inspection, containment or removal actions, and management plans.

Regulatory Scope

Federal regulations covering asbestos are modified under TSCA and CAA regulations. The regulatory requirements applicable to asbestos at Federal facilities are outlined below:

- Emission Standards for Asbestos (40 CFR Part 61 Subpart M) -- establish standards for:
  - Asbestos mills
  - Roadways

- Manufacturing
- Demolition and renovation (applicability, notification, asbestos emission and control)
- Spraying
- Fabricating
- Insulating materials
- Waste disposal.

- Reporting Commercial and Industrial Uses of Asbestos (40 CFR Part 763, Subpart D) -- requires reporting by persons who manufacture, import or process asbestos.

- Asbestos-Containing Materials in Schools (40 CFR Part 763, Subpart E) -- requires local education agencies (LEAs) to identify friable and nonfriable asbestos-containing materials in primary and secondary schools. The subpart also requires LEAs to submit a management plan to their state and begin implementation of the plan by July 9, 1989.

- Asbestos Abatement Project (40 CFR Part 763 Subpart G) -- establishes requirements to be followed during asbestos abatement projects. The rule covers employees who take part in asbestos abatement work.

State and Local Regulatory Authority

Many State and local governments have additional, more stringent asbestos standards regarding asbestos use, removal or application. These State agencies must be contacted prior to any asbestos removal or disposal operation.

Selected Management Considerations

Agency management, responsible for implementing both TSCA and occupational safety and health provisions for the protection of personnel and the environment, has several options to choose from in addressing asbestos in Federal facilities. These options are affected to varying degrees by local factors such as funding availability, integrity of the asbestos materials, and future plans for the facility. Consideration of these options presumes management's knowledge of the presence and status of asbestos in its facilities. Management that is implementing TSCA should formally consider the following options:

- Inspection of all buildings for the presence of asbestos-containing building materials

- Maintenance of facility floor plans or blueprints showing location(s) of friable and nonfriable ACM for use during potential future renovations, repairs or demolition

- Removal or containment of asbestos in cases where severe deterioration may be dangerous to building occupants

- Preemptive removal of asbestos adjacent to valves, flanges and equipment so that emergency repairs do not become emergency asbestos removal operations

- Monitoring identified asbestos material for deterioration

- Training maintenance personnel to handle asbestos during building repair/maintenance procedures rather than relying on contractor support

- Obtaining EPA asbestos guidance documents, "Guidance Controlling Asbestos-Containing Materials in Buildings" (560/5-85-024) June 1985, also known as the Purple Book, "Asbestos Waste Management Guidance" (530 SW-85-007) and "Asbestos in Buildings - Guidance for Service and Maintenance Personnel" (560/5-85-018).

The above recommendations may assist agency management in identifying and controlling any asbestos problems. The EPA publications mentioned give guidelines on identification, handling, worker protection, and disposal.

Agency Policy

Insert applicable agency policy here.

AUDIT INFORMATION SOURCE LIST

ASBESTOS

Activity: Asbestos

Records to Review:

- Asbestos management plan
- Notifications to Regulators concerning asbestos disposal
- Records of onsite disposal and transportation and offsite disposal of asbestos
- Regulatory inspection reports
- Documentation of asbestos sampling and analytical results
- Documentation of preventive measure or action
- Results of air sampling at the conclusion of response action
- Records of asbestos training program
- List of buildings insulated with asbestos or housing asbestos-containing materials
- Record of demolition or renovation projects completed in the past 5 years that involve friable asbestos
- Facility operation and maintenance plan
- Proof of asbestos inspector's State accreditation

Physical Features to Inspect:

- Pipe, spray-on, duct, and troweled cementitious insulation and boiler lagging
- Ceiling and floor tiles.

People to Interview:

- Facility manager
- Personnel involved in asbestos removal or operations and maintenance.

ASBESTOS CHECKLIST

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 763 Subpart D	• Facility manufacturing, importing or processing asbestos has submitted a report to EPA on commercial and industrial uses of asbestos.		
40 CFR 61 Subpart M (National Emissions Standards)	• Facility is complying with the emmission standards and reporting requirements (Sec. 61.155) for the following operations: asbestos mills (61.142), roadways (61.143), manufacturing commercial asbestos (61.144), demolition and renovation involving friable asbestos (61.145, 61.146, 61.147), spraying of asbestos (61.148), fabricating commercial asbestos (61.149), installation of asbestos insulating materials (61.150), asbestos mill waste disposal (61.151), waste disposal from manufacturing, demolition, renovation, spraying and fabricating operations (61.152), inactive asbestos waste disposal sites (61.153), air cleaning for above operations (61.154), active waste disposal sites (61.156).		
40 CFR 763.84	**For operators of primary or secondary schools:** • Asbestos related activities are carried out in accordance with 40 CFR 763 Subpart E. • Custodial and maintenance employees have been properly trained.		
40 CFR 763.84	• Workers, building occupants, or legal guardians are informed about asbestos activities at least once each year.		

Activity: Asbestos

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• Short term workers who may come into contact with asbestos are properly notified of its location.		
	• Warning labels are placed in accordance with regulations.		
	• Management plans are available for inspection and concerned parties are notified of the availability of these plans.		
	• The above requirements are performed under the supervision of a designated official trained on basic knowledge of asbestos in schools regulations.		
	• Personnel performing asbestos abatement work are accredited and have no conflict of interest in the outcome of the project.		
40 CFR 763.85	• Inspections for friable and non-friable asbestos were performed by October 12, 1988.		
	• Reinspection is performed.		
	• Inspection is performed in accordance with the requirements of Part 763.85.		
40 CFR 763.86	• State accredited inspector samples for asbestos containing materials in accordance with requirements of Part 763.86.		

Activity: Asbestos

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 763.93	• An asbestos management plan was submitted to the Governor by October 12, 1988 and will be implemented by July 9, 1989. • The asbestos management plan is developed and implemented in accordance with the following regulation provisions: - Inspection and reinspection (763.85) - Sampling (763.86) - Analysis (763.87) - Assessment (763.88) - Response Actions (763.90) - Operations and Maintenance (763.91) - Training and Periodic Surveillance (763.92) - Recordkeeping (763.94) - Warning labels (763.95)		

DRINKING WATER

CHAPTER 5

DRINKING WATER

Federal Statutes

The Safe Drinking Water Act (SDWA) of 1974, as amended, establishes primary drinking water regulations applicable to public water systems. These regulations specify contaminants that may have an adverse effect on health and set maximum contaminant levels (MCLs) for water delivered to any user of a public water system. The Act also establishes secondary drinking water regulations. Secondary regulations apply to contaminants that may adversely affect the odor or appearance of the water delivered to the users of a public water system.

The Act specifies requirements for drinking water monitoring and analytical procedures, as well as enforcement procedures. Section 1428(a) of the SDWA addresses ground water protection through requirements for individual State Wellhead Protection Programs, including determination of wellhead protection areas, identification of potential sources of contamination, specification of management approaches and contingency plans, and consideration of new (future) wells.

In addition, the SDWA creates and regulates the Underground Injection Control (UIC) program, which covers the reinjection of fluids into the subsurface through a well. The program's purpose is to protect groundwater, which is a present or potential source of drinking water.

Applicability

Section 1447 of the SDWA requires all Federal agencies with jurisdiction over a public water system or with activities resulting in underground injection to comply with all Federal, State, and local MCL requirements. Under Section 1447(b) of the SDWA, EPA has the authority to exempt public water systems owned or maintained by a Federal agency from compliance with primary drinking water regulations. This authority may only be exercised upon a request by the Secretary of Defense and after finding by the President that such a waiver is necessary in the interest of national security.

A Federal facility operating a public water supply system that meets all of the following criteria must comply with the SDWA:

- The water is intended for human consumption.
- The water supply system is a community system (i.e., has at least 15 service connections or regularly serves an average of 25 individuals daily at least 60 days out of the year).
- The system has drinking water collection and treatment facilities (i.e., it does not consist solely of distribution and storage facilities).
- The facility produces some or all of its own drinking water by modifying water procured, (e.g, chlorinization of water) or sells water from its system).

All Federal agencies that own or operate underground injection wells must obtain a permit or meet requirements for operators permitted by language in the regulation (permit-by-rule). The disposal of waste from any of the following activities to a well would require authorization by EPA, or the State if the State has primary enforcement responsibilities for the UIC program:

- Mining and milling underground waste discharge
- Underground waste discharge from oil and gas production
- Public domestic sewage disposal
- Industrial underground discharge
- Agricultural and dairy waste disposal
- Power plants (e.g., underground discharge of spent cooling water).

Regulatory requirements for each of these activities are specified in 40 CFR Parts 144 and 146.

Regulatory Scope

SDWA regulations are set forth in 40 CFR Parts 141-149. The regulations applicable to Federal facilities are summarized below:

- National Primary Drinking Water Regulations (40 CFR Part 141) -- specify MCLs for six categories of contaminants:

  - Inorganic chemicals
  - Organic chemicals
  - Turbidity
  - Microbiological contaminants
  - Natural radioactivity
  - Man-made radionuclides.

  Requirements for analytical methods, monitoring frequency, sampling location, reporting, public notification, record-keeping, and use of non-centralized treatment devices are also included. Monitoring for organic chemicals, sodium and corrosivity characteristics, as well as prohibitions on the use of lead pipes, solder, and flux for new or repaired drinking water systems are contained in this part.

- National Secondary Drinking Water Regulations (40 CFR Part 143) -- establish secondary MCLs for 13 contaminants that may affect the odor or appearance of drinking water delivered to the users of a public water system, as well as specific requirements for monitoring.

- UIC Program (40 CFR Part 144) -- prohibits any underground injection of fluids, except as authorized by permit or rule. Divides injection wells into five classes:

  - Class I wells are used by cities and industry to dispose of hazardous wastes beneath the lower-most aquifer containing an underground source of drinking water.

  - Class II wells are used for residual fluids from oil and gas production, as well as injection of brine or fresh water to enhance recovery of oil or natural gas.

  - Class III wells are used for extracting minerals.

  - Class IV wells are used to dispose of hazardous and radioactive wastes; new Class IV wells are prohibited and existing wells must be phased out.

  - Class V includes all other injection wells not included in Classes I-IV, including heat pump wells (used to circulate ground water for heating office buildings) and coal processing wastewater wells.

Each of these classes of wells has rules, including:

- UIC criteria and standards (40 CFR Part 146) -- specify rules that apply to each class of wells, including requirements for construction, operating, monitoring, and reporting.

- Individual State Underground Injection Control Programs (40 CFR Part 147) -- describe the regulations of each individual State's UIC program.

- Sole Source Aquifers (40 CFR Part 149) -- provide criteria for identifying critical aquifer protection areas.

State and Local Regulatory Authority

Most States have achieved EPA approval to administer their own drinking water compliance and UIC programs. States with approved programs may establish drinking water and UIC regulations, monitoring schedules, and reporting requirements more stringent than, or in addition to, those in the Federal regulations. All Federal facilities are required to comply with these additional requirements. UIC programs run by the EPA are found at 40 CFR Part 147. Federal facilities should consult Part 147 for the appropriate regulations corresponding to their State.

Selected Management Considerations

Agency management is responsible for ensuring conformance with Federal, State, local and regional drinking water standards, initiating timely requests for permit amendments and renewals, and ensuring compliance with other environmental regulations related to the

production of drinking water. Management has an obligation to consider the following actions for enhancing regulatory compliance:

- Establish and implement procedures for obtaining, evaluating and maintaining a current file on relevant drinking water standards.

- Establish and maintain a file to remind personnel of drinking water monitoring and notification requirements.

- Develop standard operating procedures for modifying existing treatment, i.e., equipment/chemical additions.

Agency management should be aware that operation of equipment providing a supply of drinking water to employees and others may involve compliance issues with other environmental regulations such as the disposal of treatment waste products. For example:

- A materials balance approach for drinking water treatment facilities, especially where surface water is treated for consumption, can provide documentation necessary to determine applicability of other environmental regulations. Filter backwash, for example, will probably be regulated by the NPDES provisions of the CWA, while disposal of filter solids may be regulated by RCRA.

- Disposal of containers for treatment chemicals may well be regulated by RCRA.

When providing a product for human consumption, agency management should use an elevated level of care and pay special attention to the risk and consequences of what would otherwise appear to be rather inconsequential accidents. In Maryland, for example, several deaths of patients receiving dialysis treatment were related to excess fluoride as a result of the spill of a fluoridation chemical in a manner which caused it to be injected into the water supply system.

Agency management has a duty to protect consumers from contaminants the agency knows, or should know, are in the water supply even though the contaminants are not specifically regulated by the SDWA. A military installation, for example, notified its State agency when analysis showed contamination with unique military explosives for which national standards had not been developed. In this instance, the military provided the state with toxicological information upon which to base a recommended standard for human consumption.

Agency Policy

Insert applicable agency policies here.

AUDIT INFORMATION SOURCE LIST

DRINKING WATER

Activity: Drinking Water

Records to Review:

- Bacterial and chemical analyses of drinking water, including sampling dates and locations, dates of analyses, analytical methods used, and results of analyses
- Monthly operating reports (flow, chlorine residual, etc.)
- State and public notification of non-compliance with primary drinking water regulations
- Action taken by the facility to correct violations of primary drinking water regulations
- Sanitary surveys of the water system conducted by the facility itself, a private consultant, or any local, State, or Federal agency
- Public notification of non-compliance with the secondary MCL for fluoride
- Variance or exemption granted to the facility for its water supply system
- Permit authorizing the operation of an underground injection well
- Records of planning and construction of injection wells
- Results of injection well monitoring
- Records, including any petition for review, of facility projects that may potentially cause contamination of a sole source aquifer through its recharge zone.

Physical Features to Inspect:

- Drinking water collection and treatment facilities
- Underground injection wells
- Any sources of discharge that are directed to wells, i.e., floor drains, and dry wells.

People to Interview:

- Administrator(s) of facility water supply and underground injection well operations
- Personnel involved with drinking water and injection well sampling and analysis.

DRINKING WATER CHECKLIST

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Community Water Supply Systems (criteria listed in the applicability section of this chapter):		
40 CFR 141	• Water supplied by the facility complies with the following primary maximum contaminant levels (MCLs): - Inorganic chemicals (141.11 and revised MCLs, 141.62) - Organic chemicals (141.12; revised MCLs, 141.61; and recommended MCLs, 141.50) - Turbidity (141.13) - Microbiological contaminants (141.14) - Natural radioactivity (141.15) - Man-made radionuclides (141.16).		
40 CFR 141.21-30	• The facility is operating in accordance with water monitoring and analytical require ments.		
40 CFR 141.31-36	• The facility is operating in accordance with reporting, public notification, and record-keeping requirements.		
40 CFR 141.40-42	• The water supply system is monitored for organic chemicals, sodium, and corrosivity characteristics.		

Activity: Drinking Water

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 141.43	• Lead pipes, solder and flux are **NOT** used in the drinking water supply system.		
40 CFR 141.100-101	• Point-of-entry and other non-centralized water treatment devices, if used, are operated in accordance with specified criteria.		
40 CFR 142	• The facility has a variance or exemption for its water supply system if not operating in compliance with National Primary Drinking Water Regulations.		
40 CFR 143	• The facility is operating its water supply system in compliance with National Secondary Drinking Water Regulations, including: - Secondary MCLs (143.3) - Monitoring requirements (143.4) - Compliance with secondary MCL and public notification for fluoride (143.5).		
	Non-Community Water Supply Systems (criteria listed in applicability section of this chapter):		
40 CFR 141	• Water supplied by the facility complies with the following primary MCLs: - Inorganic chemicals: nitrate (141.11)		

Activity: Drinking Water

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	- Turbidity (141.13) - Microbiological contaminants: coliform (141.14).		
40 CFR 141.21-23	• The facility is operating in accordance with water monitoring and analytical requirements.		
40 CFR 141.31-36	• The facility is operating in accordance with reporting, public notification, and recordkeeping requirements.		
40 CFR 142	• The facility has a variance or exemption for its water supply system if not operating in compliance with National Primary Drinking Water Regulations.		
40 CFR 143	• The facility is operating its water supply system in compliance with National Secondary Drinking Water Regulations, including: - Secondary MCLs (143.3) - Monitoring requirements (143.4) - Compliance with secondary MCL and public notification for fluoride (143.5).		

Activity: Drinking Water

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Underground Injection Control (UIC) Program:		
40 CFR 144.6 144.11	• A facility operating one or more underground injection wells that are categorized as Class I-V wells, is authorized by permit or rule. (See chapter 8 for permit required by RCRA for storage or treatment of waste prior to injection)		
40 CFR 144.21-55	• Such wells are operating in accordance with all permit or rule requirements.		
40 CFR 146	• Each well is constructed in accordance with the criteria and standards specified for the particular class to which the well belongs.		
40 CFR 146	• Each well is operating in accordance with the rules that apply to the particular class to which the well belongs.		
40 CFR 147	• Each well is operating in accordance with the regulations of the appropriate state UIC program.		

Activity: Drinking Water

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Sole Source Aquifers:		
40 CFR 149	• The facility is **NOT** involved in any project that may potentially cause contamination (directly or indirectly) of a sole source aquifer through its recharge zone.		
40 CFR 149.104	• The facility **IS** involved in such a project and has submitted a petition to the EPA Regional Administrator to review the project.		

WATER POLLUTION

CHAPTER 6

WATER POLLUTION

Federal Statutes

The Federal Water Pollution Control Act was enacted in 1956 and amended in its entirety in 1972. The Act was extensively amended by the Clean Water Act of 1977 and its reauthorization in 1987. The intent of the legislation, now commonly referred to as the Clean Water Act (CWA), was to restore and protect the integrity of the nation's waters by controlling discharges of pollutants to those waters. The CWA regulates wastewater discharge directly to navigable or surface waters and those indirect discharges to publicly owned treatment works (POTWs). The CWA established the National Pollutant Discharge Elimination System (NPDES), which prohibits the direct discharge of a pollutant from a point source into United States waters except by special permit. Regulations on oil spill prevention and runoff control from oil and hazardous substance storage areas also were developed through the requirement for Spill Prevention Control and Countermeasure (SPCC) plans.

Applicability

Section 313 (a) of the CWA requires Federal agencies to comply with all applicable Federal, State, interstate and local requirements on the control and abatement of water pollution. Facilities should investigate their operations for regulated activities or aspects. Areas of facility operation which may be regulated include the following:

- Operations involving point source discharge (e.g., pipe, ditch) to navigable waters
- Onsite water treatment works which discharge to public sewer or into navigable waters
- Untreated discharges to public sewer
- Underground or above ground oil storage tanks
- Oil and hazardous substance storage areas where runoff is likely
- Operations involving marine equipment (e.g., boats, research vessels).

Regulatory Scope

The following regulatory requirements are applicable to Federal facilities:

- Discharge of Oil (40 CFR Part 110) -- applies to the discharge of oil into navigable water.
- Oil Pollution Prevention (40 CFR Part 112) -- establishes requirements for equipment and methods to prevent discharge of oil into United States waters not

related to transportation from on- and off-shore facilities. Part 112.3 requires facilities that could reasonably be expected to discharge oil to prepare a SPCC Plan.

- Designation of Hazardous Substances (40 CFR Part 116) -- contains a list of those substances designated as hazardous under Section 113 (b)(2)(A) of the CWA.

- Determination of Reportable Quantities for Hazardous Substances (40 CFR Part 117) -- includes reportable quantities for hazardous substances.

- EPA-Administered NPDES Permit Programs (40 CFR Part 122) -- establishes basic NPDES permitting requirements for point source discharges.

- Procedures for Decisionmaking (40 CFR Part 124) -- provides procedures for NPDES permit application.

- Criteria and Standards for the NPDES (40 CFR Part 125) -- establishes standards for the technology-based treatment requirements in NPDES permits.

- Test Procedures for the Analysis of Pollutants (40 CFR Part 136) -- specific test methods used when monitoring NPDES discharges.

- National Pretreatment Standards (40 CFR Part 403 -- requires industrial users to pretreat pollutants discharged into POTWs. Two sets of national pretreatment standards are outlined: prohibited discharge standards which apply to all facilities, and categorical pretreatment standards which are requirements mandated for over 50 specific industry types.

- Oil and Noxious Liquid Substance Regulations (33 CFR Part 151) -- establishes regulations to prevent discharge of oil and oil mixtures from vessels.

- Control of Pollution by Oil and Hazardous Substances, Discharge Removal (33 CFR Part 153) -- prescribes notification to the Coast Guard of the discharge of oil or hazardous substances as required by the CWA.

- Oil Pollution Prevention Regulations for Marine Oil Transfer Facilities (33 CFR Part 154) -- applicable to large oil transfer facilities capable of transferring oil to a vessel with a capacity of 250 or more barrels of oil.

- Oil Pollution Prevention Regulations for Vessels (33 CFR Part 155) --

- Oil and Hazardous Material Transfer Operations (33 CFR Part 156) --

- Rules for the Protection of the Marine Environmental Relating to Tank Vessels Carrying Oil in Bulk (33 CFR Part 157) --

- Marine Sanitation Devices (33 CFR Part 159) -- establishes the design and construction requirements of marine sanitation devices on vessels.

- EPA Standards (40 CFR Part 140) -- prohibits the overboard discharge of sewage into certain fresh water lakes and reservoirs and rivers.

- Proposed Rules (53 FR Part 47632) -- on November 23, 1988, EPA proposed new POTW regulations. The proposal includes requirements which would affect most Federal facilities.

State and Local Regulatory Authority

Section 402 (b) of the CWA authorizes States to administer their own NPDES permit programs. Currently 38 States have authority to issue NPDES permits. EPA often issues NPDES permits at Federal facilities regardless of the State's authority.

POTWs have the authority to establish their own pretreatment standards that can be found in local sewer system ordinances or permits. These local authorities may set more stringent standards than the national standards. All POTWs have the authority to assess penalties in at least the amount of $1,000 per day for each violation of pretreatment standards.

Selected Management Considerations

Agency management is responsible for ensuring conformance with Federal, State, local and regional CWA standards, for initiating timely requests for permit amendments and renewals, and for ensuring compliance with other environmental regulations which are related to the treatment of municipal and industrial wastewater. Management should consider the following actions for enhancing regulatory compliance:

- Establish and implement procedures for obtaining, evaluating and maintaining a current file on relevant wastewater treatment standards.

- Establish and maintain a tickler file on wastewater treatment permit-related milestones.

- Develop standard operating procedures requiring plant operation and maintenance changes, new source influents, and pretreatment agreements to be reviewed and approved prior to implementation.

Agency management should be aware that operation of a wastewater treatment plant may involve compliance with environmental regulations besides the CWA, such as:

- The use of a materials balance approach for wastewater treatment plants can provide documentation necessary to determine applicability of other environmental regulations. Disposal of sludge, for example, will probably be regulated by RCRA, while digester gas emissions may come under the control of the CAA.

- Disposal of containers for treatment chemicals may need to comply with RCRA because of the nature of the chemicals.

Agency management should ensure that their focus is not solely upon wastewater treatment plants but also on the latent effects of operations conducted in accordance with other environmental regulations, such as:

- The application of pesticides, insecticides, rodenticides and herbicides can violate the CWA when surface water runoff contaminated with these chemicals enters a waterway (i.e., non-point source runoff).

- The backwash from a drinking water treatment plant will require a CWA NPDES permit for discharge to a receiving stream.

- Boiler blow-down from an air emissions source may be regulated under the NPDES provisions of the CWA or the pretreatment provisions depending on its discharge point.

Agency Policy

Insert applicable agency policy here.

AUDIT INFORMATION SOURCE LIST

Activity: Water Pollution

Records to Review:

- NPDES permit
- NPDES permit renewal applications (if expiring within 180 days)
- Discharge monitoring reports for the past year
- Laboratory records and procedures and EPA QA results
- Monthly operating reports for wastewater treatment facilities
- Flow monitoring calibration certification and supporting records
- Ash pond volume certification and supporting records
- Red water inspection records
- Special reports, certifications, etc., required by NPDES permit
- SPCC Plan
- All records required by SPCC Plan
- Oil transfer manual (33 CFR Parts 154 and 156)
- Best management practices plan
- Notices of noncompliance
- Notices of violations
- NPDES State or Federal inspection reports
- Sewage treatment plant operator certification
- Administrative Orders
- Sewer line and storm drain layout
- Local sewer ordinance
- Local sewer use permit
- Notification to local POTW
- Old spill reports
- O & M manuals
- Training manuals
- Repair/maintenance records for the wastewater treatment system.

Physical Features to Inspect:

- Discharge outfall pipes
- Wastewater treatment facilities
- Floor drains
- Sink drains
- Above ground and underground oil storage tanks
- Neutralization pits
- Glass washing facilities.

People to Interview:

- Facility Manager
- Author of NPDES Monthly Operating Reports
- Enviromental Compliance Coordinator
- Treatment plant operator or wastewater engineer.

WATER POLLUTION CHECKLIST

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 110	• Facility does not discharge oil in quantities that may be harmful to navigable waters of the United States or adjoining shorelines, waters of the contiguous zone, or waters seaward of the contiguous zone.		
	• Facility immediately notifies the National Response Center at 800-424-8802 of any such discharge of oil.		
40 CFR 112	• Facility is operating in compliance with requirements for equipment and methods to prevent oil discharge from non-transportation-related on- and offshore facilities.		
40 CFR 112.3	• Such a facility has prepared a Spill Prevention Control and Countermeasure (SPCC) Plan, if their capacity to store oil exceeds the following: - 42,000 gallons underground - 1,320 gallons above ground - 660 gallons in any single above ground container.		
40 CFR 112.4	• The SPCC Plan includes the following: - An amendment describing any spill event if two or more have occurred in the past 12 months, including the corrective action taken and plans for preventing a recurrence.		

Activity: Water Pollution

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	- An amendment if there has been a change in facility design which affects possible oil discharge.		
40 CFR 112.7	- A prediction of the direction, rate of flow, and total quantity of oil that could be discharged from a major failure of equipment at the facility.		
	- A description of containment measures used to prevent discharged oil from reaching a navigable water course.		
	- A certification by a Registered Professional Engineer.		
40 CFR 116-117	• If over any 24-hour period a discharge of a designated hazardous substance equal to or exceeding the reportable quantity has occured, the facility has immediately notified the National Response Center at 800-424-8802.		
40 CFR 122	• Facility operates in compliance with requirements of their National Pollutant Discharge Elimination System (NPDES) permit for point source discharges into navigable waters of the United States.		
40 CFR 136	• Test procedures outlined in this section are used when monitoring NPDES discharges.		
40 CFR 140	• Marine vessels do not discharged sewage into fresh water lakes and reservoirs and rivers.		

Activity: Water Pollution

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 403.5	• The facility meets all of the following prohibited discharge standards through pretreatment of pollutants discharged to a POTW. - No flammable or explosive pollutants - No Corrosive pollutants (<5.0 pH) - Solid or viscous pollutants which obstruct the flow to or in the POTW - Any pollutants at a flow rate or concentration which may interfere with the POTW (high BOD) - Heat exeeding 40 (104 F)		
40 CFR 403.6	• If the facility qualifies as any of the industry types for which categorical pretreatment standards have been promalgated, the operations at the facilities meet the standards.		
33 CFR 151	• Ships owned or operated by the facility do not discharge noxious liquid pollutants, including oil and oil mixtures, into navigable waters.		
33 CFR 153	• An operator of a ship or an on- or offshore facility immediately notifies the National Response Center at 800-424-8802 of any discharge of oil or hazardous substance into navigable waters of the United States.		

Activity: Water Pollution

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
33 CFR 154	• Marine oil transfer facility is operating in compliance with these regulations for oil pollution prevention.		
33 CFR 155	• Ships owned or operated by the facility are operating in compliance with these regulations for oil pollution prevention.		
33 CFR 156	• Oil and hazardous material transfer operations comply with these regulations for oil and hazardous material pollution prevention.		
33 CFR 157	• Tank vessels weighing 150 gross tons or more that carry oil or oil products in bulk are operating in compliance with regulations for the protection of the marine environment.		
33 CFR 158	• Port or terminal facility is operating in compliance with these regulations for the control of residues and mixtures containing oil or noxious liquid substances.		
33 CFR 159.7	• Facility that builds, tests, or operates marine vessels is operating in compliance with these certification, design, construction, testing, and use regulations for marine sanitation devices.		

NONHAZARDOUS SOLID WASTE

CHAPTER 7

NONHAZARDOUS SOLID WASTE

Federal Statutes

Subtitle D of the Resource Conservation and Recovery Act (RCRA) established Federal standards for management of nonhazardous solid wastes. The primary goals of the Subtitle are to encourage environmentally sound solid waste management practices, recycling waste material, and resource conservation. Subtitle D has two main parts:

- Mandatory technical standards for nonhazardous solid waste disposal facilities
- Voluntary solid waste management grant programs for States.

Solid waste is defined as garbage, refuse, sludge, and other solid, liquid, semi-solid or contained gaseous material which is discarded, has served its intended purpose, or is a mining or manufacturing by-product.

Applicability

Section 6001 of RCRA requires Federal agencies to comply with the guidelines set forth in the Act. The guidelines apply to all nonhazardous solid waste generated by Federal agencies even if it is not processed or disposed of on Federal property.

The following types of facility operations may be subject to nonhazardous solid waste rules:

- Thermal processing of more than 50 tons per day of municipal-type solid waste
- Collecting and storing residential, commercial and industrial solid waste
- Operating land disposal sites or using independent landfills for solid waste disposal
- Selling beverage containers (e.g., soda vending machines on the property)
- Employing more than 100 employees and using high grade paper
- Purchasing products that contain recycled materials
- Purchasing cement and concrete that contain fly ash.

Regulatory Scope

Nonhazardous solid waste regulations applicable to Federal facilities are set out in 40 CFR Parts 240-249. The following areas require attention by facility personnel:

- Thermal Processing (40 CFR Part 240) -- establishes guidelines for thermal processing facilities designed to process or are processing 50 tons or more per day of municipal-type solid wastes. The requirements delineate minimum levels of performance in areas such as air quality, water quality, vectors and general operations.

- Land Disposal (40 CFR Part 241) -- establishes minimum levels of performance required of any solid waste land disposal facility. Facilities that use offsite land disposal operations must ensure that these operations comply with the guidelines.

- Storage and Collection of Residential Commercial and Institutional Solid Waste (40 CFR Part 243) -- establishes minimum levels of performance required of solid waste collection operations. The requirements and recommended procedures cover storage, safety, collection equipment, collection frequency and management.

- Beverage Containers Management (40 CFR Part 244) -- establish beverage container recycling and return policies for all facilities that sell them.

- Promulgation of Resource Recovery Guidelines (40 CFR Part 245) -- establishes minimum actions for Federal agencies for planning and establishing resource recovery facilities.

- Source Separation for Materials Recovery (40 CFR Part 246) -- establishes guidelines for source separation of residential, commercial, and institutional solid wastes. The key requirement of this part is that office facilities with more than 100 workers separate high grade paper for recycling.

- Federal Procurement of Cement and Concrete Containing Fly Ash (40 CFR Part 249) -- designates cement and concrete containing fly ash as a product area for which affirmative procurement actions are required.

Sections 40 CFR Parts 254, 255, 256 and 257 deal with citizens suits for RCRA noncompliance, the development of regional and State solid waste management plans, as well as the classification of solid waste facilities and practices. Federal facilities would be subject to these requirements as they are established in each State or region.

State and Local Regulatory Authority

Most States, counties and municipalities have received at least partial authority to implement nonhazardous solid waste disposal programs. For example, New Jersey's Recycling Act of 1987 mandates the segregation and recycling of at least three components of household waste. The Act specifies that counties must institute mandatory recycling, but the recycling may be implemented and enforced on a municipal basis. Many States add more stringent requirements to operating land disposal facilities.

Selected Management Considerations

Agency management is responsible for ensuring conformance with Federal, State and local nonhazardous solid waste regulations, associated facility standards, and ensuring compliance with other environmental regulations related to the management of this waste.

Management has an inherent obligation to consider the following actions for enhancing regulatory compliance:

- Establish and implement procedures for obtaining, evaluating and maintaining a current file on relevant non-hazardous solid waste regulations, standards and mandated operating procedures.

- Develop standard operating procedures requiring modifications to existing waste management practices equipment/supply procurement to be reviewed for waste generating impact prior to implementation.

Compliance with non-hazardous solid waste requirements does not relieve agency management of conformance with other regulations associated with the waste(s) being managed, for example:

- High grade paper containing classified information, procurement sensitive data or information pertaining to the privacy of individuals may need to be shredded or otherwise treated prior to being released for waste recovery operations.

- Collections and sale of dinning facility garbage for use as animal food may require agency management to ensure that the buyer will comply with public health rules and regulations in the transportation, storage, treatment and use of the garbage.

- Facilities converted for use as waste storage, processing and shipping areas may need renovation for the new use to comply with fire and public health regulations.

Agency management may well need to implement new and innovative practices and procedures for a waste management program to be cost effective. Options that management has an obligation to consider include:

- Coordinating with other nearby Federal agencies to consolidate similar type wastes such that the resulting volume available for recycle/recovery becomes cost effective to manage.

- Determining if the supplier of the material that becomes a waste can also be used, through contract provisions, as a recovered waste purchaser. Aluminum beverage container recycling by the beverage supplier is a typical example of such an option.

Agency Policy

Insert applicable agency policies here.

AUDIT INFORMATION SOURCE LIST

NONHAZARDOUS SOLID WASTE

Activity: Nonhazardous Solid Waste

Records to Review:

- Record of current nonhazardous solid waste management practices
- Documentation of locations (map) and descriptions of all nonhazardous storageand transfer areas
- Records of operational history of all active and inactive TSDFs
- State and Federal inspection reports
- Environmental monitoring procedures or plans
- Records of resource recovery practices, including the sale of materials for the purpose of recycling
- Feasibility study of recycling high-grade paper

Physical Features to Inspect:

- Resource recovery facilities
- Incineration and land disposal facilities.

People to Interview:

- Thermal processing, land disposal, collection, storage, and resource recovery facility operators
- Site manager.

NONHAZARDOUS SOLID WASTE CHECKLIST

Facility:_____ Auditor:_____ Date:_____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR Part 240	• Thermal processing facility processing 50 tons or more of solid waste per day is operating in compliance with specific requirement, i.e., design, air emissions, water discharges, residue disposal.		
40 CFR Part 241	• Land disposal facility for non-hazardous solid waste is operating in compliance with specific requirements, i.e., site selection, air emissions, water discharges.		
	• Facility makes every effort to dispose of non-hazardous waste at disposal facility that is in compliance with the same specific requirements.		
40 CFR Part 243	• Collection facility for residential, commercial and institutional solid waste is operating in compliance with specific requirements, i.e., storage, safety and collection.		
40 CFR Part 244	• Plastic, glass or aluminum beverage containers are recycled when markets are available (empty beverage containers are returned to the distributor for refilling or recycling).		

Activity: Nonhazardous Solid Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR Part 245	• Agencies having jurisdiction over property or facility operations where residential, commercial or institutional solid waste is either disposed or contracted out in amounts of 100 tons/day or 26,000 tons annually have established or utilize resource recovery facilities to separate and recover materials and/or energy from such solid waste.		
40 CFR Part 246	• Facility employing 100 workers or more separates high grade paper and sells it for the purpose of recycling. Recyclable wastes include typing paper, letterhead stationery, copy paper and computer printout paper. • Facilities of less than than 100 employees have investigated the feasibility of recycling high-grade paper. • Facility serving more than 500 residences separates and sells used newspapers for the purpose of recycling. • Facility separately collects and sells waste corrugated containers for the purpose of recycling if 10 or more tons per month is generated.		

HAZARDOUS WASTE

CHAPTER 8

HAZARDOUS WASTE

Federal Statutes

Many environmental and health problems associated with hazardous waste management are controlled by the Resource Conservation and Recovery Act of 1976 (RCRA). The Act regulates the generation, treatment and disposal of hazardous waste from "cradle to grave." The Act also seeks to encourage alternatives to land disposal of hazardous waste through recovery of useful material in order to reduce the waste volume. RCRA is also designed to protect air, surface and groundwater from contamination due to improper handling of hazardous waste.

RCRA was amended in 1984, with the passage of the Hazardous and Solid Waste Amendments (HSWA). These changes brought thousands of small quantity generators, previously exempted from reporting requirements, under the law. A very active RCRA regulatory program has established reporting, record keeping, performance and operating standards and requirements for all applicable facilities.

Applicability

Section 6001 of RCRA mandates that Federal facilities comply with all applicable Federal, state and local requirements dealing with hazardous waste. A facility should review RCRA and the implementing regulations if its waste exhibits hazardous characteristics, i.e., corrosivity, reactivity, ignitability or extraction procedure (EP) toxicity, or the facility generates a specifically listed waste. Wastes excluded from regulation as hazardous are household waste, crop or animal waste, mining overburden, and wastes from the extraction, processing and liquification of ores and minerals, fly ash, bottom ash, slag, flue gas emission control waste and drilling fluids and associated wastes from the production of oil and gas.

The regulatory classification of a facility is a function of the total amount of waste generated and the length of time the waste is stored onsite.
The three classes of generators are:

- Conditionally exempt small quantity generators -- those generating hazardous waste in amounts no more than 100 kilograms per month (kg/mo) and less than 1 kg of acutely hazardous waste -- including small laboratories, or even building cleaning and maintenance that generates 220 pounds or half of a 55-gallon drum.

- One hundred to 1,000 kg/month generators -- those generating hazardous wastes in amounts greater than 100 and less than 1,000 kg/mo and less than 1 kg of acutely hazardous waste -- including small industries such as vehicle maintenance (waste oil and auto fluids), metal shops, printing, photography, wood preserving and dry cleaning. The majority of laboratory operations are small quantity generators.

- Full quantity generators -- those generating hazardous wastes in an amount of 1,000 kg/mo or greater, and more than 1 kg of acutely hazardous waste -- including industrial operations and treatment facilities.

All small quantity and full quantity generators of hazardous waste are required to have an EPA identification number.

RCRA permits are required for Federal facilities where hazardous waste is treated, stored or disposed. Although the program began in 1980, EPA and States have only recently begun addressing Part B permit applications. Existing facilities have been given interim status until a final RCRA facility permit is issued. Until that time, interim status facilities must be in compliance with interim status regulations.

Regulatory Scope

Hazardous waste regulations are found at 40 CFR Parts 260-272. This regulatory program establishes the following requirements:

- Hazardous Waste Management System (40 CFR Part 260) -- contains criteria for variances from the definition of solid waste, waste stream listings as well as definitions pertinent to understanding RCRA.

- Hazardous Waste Identifications (40 CFR Part 261) -- establishes criteria for identifying a solid waste as a listed or characteristic hazardous waste. The listed wastes are specific industrial processes or commercial chemical products. A small percentage of the wastes are acutely hazardous and thus subject to more restrictive generator requirements. The four hazardous characteristics are ignitability, reactivity, corrosivity and EP toxicity.

- Requirements for Generators of Hazardous Waste (40 CFR Part 262) -- cover obtaining an EPA identification number; hazardous waste manifest system for tracking waste from "cradle to grave"; pre-transport packaging, labeling, marking, placarding and accumulation time onsite; record keeping and reporting requirements; and exporting and importing hazardous wastes.

- Requirements for Transporters of Hazardous Waste (40 CFR Part 263) -- detail requirements pertaining to receiving an EPA identification number; implementing the manifest system; delivery to designated treatment, storage and disposal facilities (TSDFs); record retention; and emergency discharge procedure.

- RCRA Part B Permitted Facility Standards for TSDFs (40 CFR Part 264) -- deal with material similar to interim status requirements with additional provisions for individual waste units, and groundwater monitoring.

- Interim Status Standards for hazardous waste treatment, storage and disposal facilities (40 CFR Part 265) -- cover preparing for and preventing hazards, contingency planning and emergency procedures, a manifest system, record keeping and reporting, ground water monitoring, facility closure requirements, use and management of containers, and design and operating specifics on tanks, surface impoundments, waste piles, land treatment units, landfills, and incinerators. In addition, give general requirements for waste analysis, security at facilities, inspection of facilities, and personnel training.

- Standards for the management of hazardous waste resource recovery and recycling facilities (40 CFR Part 266) -- detail special management provisions for wastes created by small quantity generators and wastes such as oil that are intended to be reused or recycled. Obtain EPA waste minimization document "Waste Minimization Opportunity Assessment Manual" (EPA/625/7-88/003) July 1988.

- Land Disposal Restrictions (LDR) (40 CFR 268) -- bans land disposal of certain wastes. Congress, in HSWA, established specific deadlines for the land disposal restriction of all hazardous waste. These restrictions are formulated into regulation over the next few years and codified in this part. To date, solvents and dioxin wastes as well as all "California list" and the "first third" wastes have been restricted. All wastes will be land disposal banned effective May 8, 1990. Under these bans, most wastes must meet stringent treatment standards before they can be disposed of in a hazardous waste landfill. The waste-specific treatment standards are contained in 40 CFR Parts 268.41,42 and 43. A "soft hammer" provision in the statute provides that if EPA has not established treatment standards by deadlines, then LDR waste is prohibited from disposal, with some exceptions listed in 40 CFR Part 268.8.

- Hazardous waste permit program (40 CFR Part 270) -- addresses permit requirements for containers, tanks, surface impoundments, waste piles, incinerators, landfills and underground injection control wells. Every application must include provisions for "corrective action for all releases of hazardous wastes or constituents" from any solid waste management unit at the facility, regardless of when the waste was placed there.

- State authorization requirements (40 CFR Parts 271, 272) -- outline the procedures by which a State obtains authorization to implement the RCRA program in lieu of the Federal government.

- Hazardous materials transportation regulations which are applicable to waste handling (49 CFR Parts 171-177) -- set forth proper shipping standards.

In addition to these regulations, many publications explaining the RCRA program are produced by the Office of Solid Waste, established within EPA under RCRA. Questions can also be answered by calling the EPA RCRA/Superfund Hotline (1-800-424-9346).

State and Local Regulatory Authority

Although most States now have received authorization to run their own RCRA program, EPA still supervises State regulatory operations. The most significant differences between State and Federal law generally address the following:

- The definition of hazardous waste; e.g., the State of New Jersey considers waste oil as hazardous waste and the Federal law does not

- The definition of small quantity generator and length of time a waste can be stored onsite
- State storage criteria; e.g., the State of New Jersey does not allow storage of hazardous waste in "waste piles" under any circumstances. Such storage is allowed under Federal regulations.

Forty-two states have RCRA-implementing authority within their environmental program. The states without RCRA authority are Alaska, California, Connecticut, Hawaii, Idaho, Iowa, Ohio and Wyoming.

Selected Management Considerations

Agency management is responsible for ensuring conformance with Federal, State, local and regional hazardous waste standards, for initiating timely requests for permit amendments and renewals, and for timely notification of enforcement agencies of the existence of certain non-conformance situations. The following actions can improve compliance:

- Establish and implement procedures for obtaining, evaluating and maintaining a current file on relevant hazardous waste standards.
- Establish and maintain a file for permit-related milestones.
- Establish and maintain a quick-reference file of site-specific operating condition excursions (i.e. spills and similar releases of hazardous substances to the environment), time limits for reporting and an enforcement agency point-of-control listing for such episodes.
- Develop standard operating procedures for TSDF equipment modifications and for new hazardous materials procurement to ensure review for permit compliance prior to implementation or use.

Agency management has an inherent responsibility to train management staff as well as line staff in their responsibilities and vulnerabilities under the provisions of RCRA and associated regulations. The frequency as well as the scope of training are dependent on the extent and nature of use of hazardous materials at the facility.

Operations involving hazardous materials and wastes may require compliance with other regulations besides those pertaining to hazardous waste. A material balance approach to hazardous material/waste operations can provide documentation necessary to determine applicability of other environmental and occupational safety and health regulations. The balance can show material loses through ventilation/hood exhausts (normally governed by CAA), dawn floor/sink drains (normally governed by CWA), or via mixing with non-hazardous solid waste (normally governed by other RCRA provisions). The balance can also show where employees may be exposed to the hazardous material wastes (normally governed by OSHA).

RCRA listed and characteristic wastes should be considered as a top priority item for an agency's waste minimization program. Costly and restrictive hazardous waste disposal requirements may justify modifying equipment producing the waste, or substituting less hazardous materials for the problem hazardous materials. Such considerations should be made/revisited at least yearly or more frequently if the technology is making rapid advancements.

Agency Policy

Insert applicable agency policies here.

AUDIT INFORMATION SOURCE LIST

HAZARDOUS WASTE

Activity: Hazardous Waste

Records to Review:

Generator (including TSDFs if they are also generators):

- Notification (EPA ID#)
- Hazardous waste manifests
- Manifest exception reports
- Biennial reports (large quantity generators only)
- Delistings
- Speculative accumulation records
- Land disposal restriction certifications
- Employee training documentation
- Hazardous waste tank integrity assessments
- Contingency plan (full quantity generators only)
- Notifications of hazardous waste oil fuel marketing or blending activity.

In addition to the above, TSDFs would require:

- Unmanifested waste reports
- Facility audit reports (Inspection log)
- Waste Analysis Plan(s)
- Operating record
- Ground water monitoring records and annual reports
- Facility Biennial reports
- Closure/Post Closure Plans
- Closure/Post Closure Notices (where applicable)
- Other documents as required by the Permit.

Physical Features to Inspect:

- Hazardous waste storage building
- Landfills
- Surface impoundments
- Incinerators
- Waste piles

People to Interview:

- Environmental Compliance Coordinator

HAZARDOUS WASTE CHECKLIST

Facility:_____ Auditor:_____ Date:_____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	General Requirements:		
40 CFR 260.22	• Records demonstrating delisted waste streams are maintained where applicable.		
	Identification and Listing of Hazardous Waste:		
40 CFR 261.1	• Records are maintained substantiating that 75% of each waste stored for the purpose of recycling is recycled in a calendar year.		
40 CFR 261.2	• Each solid waste stream (wastes generated that are being discarded, abandoned or recycled) has been correctly isolated and identified.		
40 CFR 261.4	• Waste streams exempt from RCRA have been correctly identified and are managed separately as a non-hazardous waste.		
40 CFR 261.6	• Waste streams that are recycled and exempt are handled as a non-hazardous waste or under the appropriate provisions of Part 266.		
40 CFR 261.7	• Hazardous waste containers that are discarded meet criteria for "RCRA empty."		
40 CFR 261.3 261.20-24 261.30-33	• Each remaining solid waste stream has been analyzed to determine if it is either a characteristic hazardous waste or a listed hazardous waste prior to treatment, recycling or disposal.		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Conditionally Exempt Small Quantity Generator Requirements:		
40CFR 261.5	• Each waste stream is correctly isolated and identified		
	• Waste is sent to a permitted facility		
	• No more than 1000kg of hazardous waste and 1kg of acutely hazardous waste has accommodated on site		
	One Hundred to 1000kg/mo and Full Quantity Generator Requirements:		
40 CFR 262.12	• Generator of hazardous or acutely hazardous waste has obtained an EPA identification number.		
40 CFR 262.20-23	• Waste is manifested as required, and copies of manifests are retained for three years.		
40 CFR 262.30-33	• Department of Transportation pre-shipping specifications (49 CFR 171-177) are followed.		
40 CFR 262.34	• Full quantity generator is accumulating waste no longer than 90 days. One hundred to 1,000 kg/month generator is accumulating waste no longer than 180 days, unless waste shipment is transported in excess of 200 miles, in which		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	case the waste is stored no longer than 270 days. Waste is accumulated in containers or tanks in compliance with 40 CFR Part 265 Subpart I or J, respectively. Full quantity generator is following procedures for preparedness and prevention (Part 265 Subpart C) as well as contingency plans and emergency procedures (Part 265 Subpart D). Employee handling waste is trained in accordance with Part 265.16. One hundred to 1,000 kg/month generator is complying with the corresponding reduced requirements of 262.34(d). Accumulation of hazardous or acutely hazardous waste at or near any point of generation is managed properly.		
40 CFR 262.40-44	• Reports and records are on file including: test results, waste analyses, biennial reports, and manifests.		
40 CFR 262.50-60	• The export or import of hazard waste to or from foreign countries is managed in compliance with RCRA requirements.		
	Transporter Specifications:		
40 CFR 263.11	• Transporter has obtained an EPA identification number.		
40 CFR 263.12	• During transport to a treatment, storage or disposal facility, waste is not stored in excess of 10 days at a transfer facility.		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 263.20-22	• Waste is transported using a manifest or appropriate invoice for rail and water shipments, and the appropriate records are maintained for three years.		
40 CFR 263.30	• Accidental discharges during transport are appropriately reported and documented.		
	Treatment, Storage and Disposal Facilities (TSDFs):		
	Requirements for Interim Status TSDFs (40 CFR Part 265) and Permitted TSDFs (40 CFR Part 264) are discussed jointly. Interim status standards are provisional guidelines a TSDF must follow until it obtains a full RCRA Part B operating permit. The Part 264 technical provisions, Subparts I-X are, in some cases, more stringent than those required during operation under Interim Status. The Part 264 standards are *italicized* when significantly different than 265. Once permitted, a TSDF is subject only to the permit specifications.		
	General:		
40 CFR 264/265.1	• All units exempt from Part 264/265 requirements have been correctly identified.		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	TSDF Standards:		
40 CFR 264/265.11.	• The TSDF has obtained an EPA identification number (unless it has already been assigned one as a generator).		
40 CFR 264/265.13-15	• Waste is handled in compliance with the TSDF's waste analysis plan. Proper security measures are maintained. Inspections are routinely performed and recorded in an inspection log.		
40 CFR 264/265.16	• Employees are trained in the handling of hazardous waste, and proper records are maintained as documentation. (Full Quantity Generators are subject to this provision).		
	Preparedness and Prevention (also applies to 100 to 1,000 Kg/mo and Full Quantity Generator):		
40 CFR 264/265.30-34	• Emergency cleanup and communication systems are maintained.		
40 CFR 264/265.35, 37	• Ample aisle space is available between waste containers, tanks and generating units to allow for access to any area in an emergency. A rapport with local emergency officials has been established to ensure rapid emergency response.		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Contingency Plan and Emergency Procedures (also applies to Full Quantity Generator):		
40 CFR 264/265.50-56	• A contingency plan is available for review on-site. An emergency coordinator is available, and is familiar with all requisite emergency procedures.		
40 CFR 264/265.70-72, 75-77	• Manifests are signed and retained as required when shipments of hazardous waste are received from off-site. Waste shipments without manifests or shipments with manifest discrepancies are resolved and, if necessary, documented. Waste sent off-site is done so in compliance with Part 262 (generator) requirements, and is recorded in the facility's biennial report with all other required information as specified.		
40 CFR 264/265.73	• A detailed operating record is maintained including waste analysis data, land disposal restriction notices, etc.		
	Groundwater Monitoring for Permitted Facilities:		
40 CFR 264.90-97	• *Each land disposal unit (waste pile,* surface impoundment, landfill, land treatment *unit, and applicable Subpart X units) at the facility is monitored in compliance with the facility's groundwater protection standard in their permit.*		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• *Monitoring wells (identified in the permit) are sampled at the correct frequency up to the "point of compliance."*		
	• *Samples are analyzed for statistically significant increases in hazardous constituents levels established in the permit.*		
	• *Samples are taken and handled using sound and consistent procedures for preservation, chain of custody, etc.*		
	• *Monitoring wells are in good operating condition.*		
40 CFR 264.98-100	• *Elements of a detection monitoring, compliance monitoring or corrective action monitoring program are being followed depending on the status of releases from land disposal units.*		
40 CFR 264.101	• *Releases from land disposal units are addressed in the corrective action program.*		
	Groundwater Monitoring for Interim Status Facilities:		
40 CFR 265.90-94	• A groundwater monitoring program exists for each land disposal unit (surface impoundment, landfill and land treatment unit).		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• There exists, at a minimum, one upgradient monitoring well and three downgradient wells of sound design and in good working order. • The number of wells is sufficient to monitor the entire waste management area. • Samples are obtained at the proper frequency and analyzed for the correct parameters. The results are compared for statistical significance with pre-established background data. • The TSDF is following a detection or assessment (if a release has been detected) monitoring protocol. • The TSDF is maintaining sampling analysis results and submitting the required annual reports.		
40 CFR 264/265.110-116	**Closure and Post-Closure:** • The TSDF maintains a closure plan. It is updated to reflect changes at the TSDF (e.g., facility upgrades or partial closure). The plan sufficiently outlines the procedures required to close each land disposal unit including provisions for "clean closure."		
40 CFR 264/265.118-120	• A post-closure plan is maintained for each land disposal unit, and updated as is necessary. All required notices have been submitted for closed land disposal units.		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Use and Management of Containers (also applies to 100-1000 kg/mo and Full Quantity Generator):		
40 CFR 264/265.170-175	• Containers are in good condition with no visible leaks, remain covered at all times except when waste is added, and areas where containers are stored are inspected at least once weekly. *At permitted facilities, the storage area has a containment system that has the required capacity to hold leaks and control runoff.*		
40 CFR 264/265.176-177	• Ignitable or reactive waste is stored at least 50 feet from the facility's property line, and incompatible waste is stored in separate containers (applies to full generator only).		
	Tank Systems (also applies to 100-1000 kg/mo and Full Quantity Generator):		
40 CFR 264/265.190-191	• Tank used to store hazardous waste is identified and labeled properly (for generator accumulation tanks only). Tank without secondary containment is assessed for integrity regularly as required, and these records are available for review.		
40 CFR 264/265.192-193	• Tank is properly designed and installed. All new tank systems have secondary containment added to existing tanks as required.		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 264/265.194-196	• Tank operator follows appropriate operating requirements, and inspects the tank system at required intervals. Major repairs, if any, are certified.		
40 CFR 265.201	• 100 to 1,000 kg/mo Generator complies with the less stringent operating requirements and inspection procedures.		
	Specific Requirements for Other Hazardous Waste Units:		
	• TSDF is complying with the operating requirements and design criteria contained in a permit specific to each of the following individual waste management unit:		
40 CFR 264/265.220	- Surface Impoundments (Subpart K)		
40 CFR 264/265.250	- Waste Piles (Subpart L)		
40 CFR 264/265.270	- Land Treatment (Subpart M)		
40 CFR 264/265.300	- Landfills (Subpart N)		
40 CFR 264/265.340	- Incinerators (Subpart O)		
40 CFR 365.370	- Thermal Treatment (Subpart P)		
40 CFR 265.400	- Chemical, Physical and Biological Treatment (Subpart Q)		
40 CFR 265.430	- Underground Injection (Subpart R) (See Chapter 5 for permit required by SDWA)		

Activity: Hazardous Waste

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 264.600	- *Miscellaneous Units (Subpart X).*		
	Energy Recovery and Recycling Activities:		
40 CFR Part 266	• Generator or TSDF engaged in hazardous waste or used oil burning for the purpose of energy recovery is complying with Subparts D and/or E and 40 CFR 261.6. There are separate requirements for generators, marketers of fuel and burners of fuel.		
	• Generator or TSDF recycling materials for precious metal recovery or reclaiming lead-acid batteries is complying with Subparts F and/or G, respectively and 40 CFR 261.6.		
	Land Disposal Restrictions:		
Part 268.7, 268.8	• Generator or TSDF manifested shipment of waste subject to the land disposal restrictions is accompanied by a notification that includes: - EPA hazardous waste number - List of waste-specific treatment standards - Accompanying manifest number - Waste analysis data (if applicable)		
	• TSDF's land disposing of restricted wastes have documents certifying that the wastes met the appropriate treatment standards prior to land disposal. These records have been retained for at least five (5) years.		

UNDERGROUND STORAGE TANKS

CHAPTER 9

UNDERGROUND STORAGE TANKS

Federal Statutes

The 1984 amendments to the Resource Conservation and Recovery Act (RCRA) included provisions to prevent leaks from underground storage tanks (UST), mandating a comprehensive regulatory program for USTs that store petroleum, petroleum by-products (i.e., gasoline and crude oil) or substances defined as hazardous under CERCLA Section 101(14). An underground storage tank is defined as any combination of tank and underground pipes where the volume of the tank is 10 percent or more beneath the ground surface (including underground piping).

Section 9002 of RCRA barred the installation of unprotected tanks after May 7, 1985. All new USTs must meet corrosion protection requirements. In addition, the EPA or designated State agencies must be notified of the presence of existing regulated USTs.

Provisions in the new UST program required EPA to develop regulations for new tanks including design, construction, installation release detection and compatability standards. This rule was promulgated September 23, 1988, and became effective December 22, 1988.

Applicability

Any Federal facility that owns an UST containing a regulated substance is subject to the provisions of RCRA, as specified in Section 6001. Federal facilities are not subject to the financial responsibilities of the UST regulations. In addition, the regulations do <u>not</u> apply to the following:

- Tanks holding a RCRA Subtitle C hazardous waste
- Farm or residential tanks storing fuel for consumptive use with a capacity of less than 1,100 gallons
- Tanks storing heating oil used exclusively for heating on the premises
- Septic tanks
- Pipelines regulated under other laws
- Surface impoundments, pits, ponds or lagoons
- Storm water or wastewater collection systems
- Flow-through process tanks
- Storage tanks located in an underground area such as a basement

- Liquid traps or associated gathering lines directly related to oil and gas production and gathering.

Agency management must compare their tank operations with these descriptions of tank use to determine the applicability of regulations to each facility.

Tanks deferred from portions of the requirements include:

- Wastewater treatment tank systems
- USTs containing radioactive substances regulated by the Atomic Energy Act
- USTs that are part of an emergency generator system at facilities regulated by the Nuclear Regulatory Commission
- Airport hydrant fuel distribution systems
- UST systems with field constructed tanks.

These deferred tanks are subject only to the corrective action provisions of the new regulations. UST systems storing fuel solely for use by emergency power generators are subject to all provisions of the regulations except release detection.

Regulatory Scope

UST regulations applicable to Federal facilities are found at 40 CFR Part 280. A brief description of the requirements follows:

- Program Scope (40 CFR Part 280.10) -- gives definitions for the UST program and applicability of the regulations to each system.
- Tank Design, Construction and Installation (40 CFR Part 280.20) -- requires cathodic protection and equipment to prevent spills and overfills; also requires UST owners/operators to register each tank with the appropriate State agency.
- General Operating Requirements (40 CFR Part 280.30) -- requires owner/operator be present at all times when tank is filled and make regular inspections of corrosion protection equipment.
- Release Detection (40 CFR Part 280.40) -- requires all new UST systems to be installed with release detection systems. Special requirements for hazardous substance USTs are outlined.
- Release Reporting and Corrective Action (40 CFR Parts 280.50 and 280.60) -- requires notification of an oil spill in excess of 25 gallons in a 24-hour period or hazardous substances exceeding reportable quantities.
- UST Closure (40 CFR Part 280.70) -- provides closure requirements, including tank and site assessments.

State and Local Regulatory Authority

Several States have, or are developing, regulatory programs for underground storage tanks. EPA has allowed, in some instances, interim approval for States to implement their own UST programs. After a one to three-year grace period, however, State requirements must be no less stringent than Federal requirements. It is often State personnel who request information from tank owners, inspect and sample tanks, and monitor and test tanks under enforcement of the new regulations.

Selected Management Considerations

UST regulations apply to abandoned as well as presently used tanks. Because of the expense of removing an UST, past practices frequently included capping and abandoning leaking or obsolete tanks. Agency management may need to review installation records or speak with retired employees to determine the location of abandoned USTs. Tanks taken abandoned after January 1, 1974, are subject to the notification requirements.

Agency mangement is responsible for USTs on land controlled by the agency even if the USTs were installed by a previous owner. This situation normally occurrs when an agency takes contorl of land excessed through GSA by another agency. Although present GSA policy requires certification of the land as being free of environmental contaminants such as from leaking UST, this is relatively new requirement. When land was acquired in such a manner, agency management is responsible for taking timely actions to identify USTs.

Agency Policy

Insert applicable agency policies here.

AUDIT INFORMATION SOURCE LIST

UNDERGROUND STORAGE TANKS

Activity: Underground Storage Tanks

Records to Review:

- Results of all UST testing, sampling, monitoring, inspection, maintenance, and repair work (for past 1 year)
- Notification records for all in-service, temporarily out-of-service, and permanently closed tanks
- Records of all spills, leaks, and associated site assessment/cleanup activities (for past 3 years)
- Records for UST disposal, closure and removal activity and results of excavation area assessment (for past 3 years)
- Official correspondence with State implementing agency.

Physical Features to Inspect:

- Underground storage tank and vicinity
- Venting
- Maintenance manhole
- Fill pipe
- Tank gauge.

People to Interview:

- Facility manager (person responsible for the daily operation of the UST system.)
- Tank installer
- Environmental Compliance Coordinator.

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Notification Requirements:		
40 CFR 280.22	• Existing underground storage tanks (USTs) and USTs taken out of service after January 1, 1974 are registered with the proper state agency.		
	• UST installed after May 8, 1986 was and new UST is registered within 30 days of tank's initial use.		
	• Facility uses a notification form from their State agency.		
	Technical Requirements:		
40 CFR 280.20	• New UST is installed according to manufacturer's recommendations.		
	• New UST is (and existing UST will be by December 22, 1998) protected from corrosion by one of the following methods:		
	- Fiberglass; or		
	- Fiberglass-reinforced plastic construction; or		
	- Corrosion resistant coating and cathodic protection; or		
	- State agency-approved tank design.		

Activity: Underground Storage Tanks

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 280.20	• New UST is (and existing UST will be by December 22, 1998) equipped with spill prevention or overflow devices using the following: - Spill catchment basin located around the fill pipe; and - Liquid level sensors with alarm; or - Automatic shut-off device; or - Ball float valves		
40 CFR 280.32	• Stored substance is compatible with UST material.		
40 CFR 280.33	• For any repaired UST written record is available that prove tightness test.		
40 CFR 280.41	• New petroleum UST is equipped to detect leaks and is monitored every 30 days. Existing USTs must comply within 1-5 years from December 22, 1988, using any of the following: - Automatic tank gauging - Vapor monitoring - Interstitial monitoring - Groundwater monitoring		

Activity: Underground Storage Tanks

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 280.34	**Record Keeping:** • The facility maintains the following: - Results of all UST testing, sampling, monitoring, inspection, maintenance, and repair work (for past 1 year) - Registration records for all in-service, temporarily out-of-service, and permanently closed tanks - Records of all spills, leaks, and associated site assessment/cleanup activities (for past 3 years) - Records for UST disposal, closure and removal activity and results of excavation area assessment (for past 3 years) - Official correspondence with state implementing agency.		

Activity: Underground Storage Tanks

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	USTs Storing Hazardous Substances:		
40 CFR 280.42	• The UST meets the requirements for petroleum UST systems (Part 280.41). • New UST is equipped with secondary containment (i.e., double-walled tank, concrete vault, or lined area surrounding tank). • New UST is equipped with leak detection monitoring device, used between the primary and secondary walls.		
	Emergency Notification/Corrective Actions:		
40 CFR 280.53	• For any UST containing petroleum report to the proper State agency within 24 hours: - Any spill or overfill of 25 gallons or more - Any underground release in any quantity - Any above ground release into water that creates a sheen. • For any UST containing a hazardous substance, report to the proper State agency any spill or overflow that exceeds its reportable quantity under CERCLA (40 CFR Part 302). Also report to the National Response Center immediately.		

Activity: Underground Storage Tanks

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 280.62	• For such a spill or overflow, the following actions are taken: - The leak or spill is stopped and visibly contaminated soil is removed - Clean-up action is reported to the proper state agency within 20 days of the spill. • If requested by a State agency, a long-term cleanup plan is submitted for removing the spilled substance.		
	Inactive UST Closures:		
40 CFR 280.70	• Temporarily closed UST (closed for 3 months or less) has the following: - Corrosion protection system still in place - Leak detection method in place - Capped lines attached to UST except vent lines - Record of test results of site assessment ensuring no leak has occurred.		

Activity: Underground Storage Tanks

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• UST that has been out of service for longer than 12 months is permanently closed.		
40 CFR 280.71	• Closure is conducted according to industry-recom mended practices (out-of-service UST is emptied and either removed from the ground or filled with a chemically inert solid, such as sand).		
40 CFR 280.72	• A site assessment is conducted to ensure that no release has occurred.		
	• UST is disposed in accordance with local, State, and Federal regulations.		

PAST DISPOSAL OF HAZARDOUS MATERIALS

CHAPTER 10

PAST DISPOSAL OF HAZARDOUS MATERIALS

Federal Statutes

The Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) both mandate assessment of past practices related to the treatment, storage or disposal of hazardous waste.

While RCRA primarily deals with current and future waste handling, several sections of the Act require discovery or identification:

- Every application submitted for a RCRA Part B permit must include "corrective action for all releases of hazardous waste or constituents" from anywhere in the facility, regardless of when the waste was placed there. The permit applicant thus must provide full disclosure of all wastes within the facility's boundaries since the site was originally opened, and must provide for action to abate any damage that any release of this material has caused (Section 3005).

- Upon request from the State, facilities must compile, publish, and submit information relating to on-site waste storage and disposal that has taken place before permits were required. Specifically the amount, nature and toxicity of such waste must be ascertained, and any resulting health or environmental hazards must be assessed for these hazardous waste site inventory reporting requirements (Section 3012).

- Federal agencies must submit to the EPA or State an inventory of hazardous waste sites that Federal agencies own or operate, or have owned or operated in the past (Section 3016).

Section 6003 of RCRA adds to these inventory requirements for Federal agencies by stating that all Federal agencies must promptly make available upon request of the EPA Administrator all information concerning past or present waste management practices.

CERCLA was enacted in 1980 to address problems posed by past uncontrolled hazardous waste disposal practices. Section 120 of CERCLA, as amended, mandates that Federal agencies must comply with the Act's requirements to the same extent as private entities.

Various provisions in CERCLA provide for the discovery or identification of past practices:

- Section 103(a) requires persons, which includes Federal agencies, to notify the National Response Center (800-424-8802) of an off-site release of a reportable quantity of a hazardous substance.

- Section 103 (c) required persons to notify the EPA by June 9, 1981, of known or suspected hazardous waste sites. EPA has had minimal involvement with the Federal agencies' attempts to identify potential sites.

- Section 120(a) requires a Preliminary Assessment to be conducted at Federal facilities listed on the Federal Agency Hazardous Waste Compliance Docket (published at 53 FR 4280, February 12, 1988).

- Section 120(h) outlines procedures for property transfer by Federal agencies. Facilities must include in the transfer contract, information regarding the type and quantity of hazardous substances stored for one year or more, or known to have been released or disposed of on-site. The contract must include notice of the time at which such storage, release or disposal took place. The report is to be based on available data from agency files.

Each of these CERCLA provisions illustrate how Federal agencies must comply with the act's requirements to the same extent as private entities.

Applicability

Federal agencies can be held responsible for toxic/hazardous materials left behind on their properties. The following situations could prompt an investigation of past activities:

- Buying or selling land or buildings

- Applying for a RCRA Part B permit.

Past activities which lead to potential problems in buildings/structures or land areas include the following:

- Industrial/commercial or agricultural land use

- Toxic material containing equipment, such as transformers

- Contamination sources off-site

- RCRA facilities with potential abandoned or uncontrolled hazardous waste on-site.

Regulatory Scope

The following regulations implement the RCRA and CERCLA past practices investigations:

- Hazardous Waste Permit Program (40 CFR Part 270) -- provides general RCRA Part B application requirements.

- National Contingency Plan (40 CFR Part 300.68) -- sets requirements for preliminary planning.

- Proposed Rules (53 FR 850) -- on January 13, 1988 EPA proposed a new rule, 40 CFR 373, which includes general requirements, applicability, and the contents of the notice that Federal facilities must provide when transferring facilities. The rule applies to transfer of property (including buildings) on which a hazardous substance was stored for one year or more, or known to have been released or disposed.

State and Local Regulatory Authority

State Superfund laws concerning removal, remediation and enforcement apply to CERCLA actions at Federal facilities when these facilities are not included on the National Priorities List (NPL). All but nine States have a "superfund" used to clean up hazardous waste.

Selected Management Considerations

Agency management is responsible for making every reasonable effort to comply with the disclosure requirements described in this chapter. When the property has been used by the Federal government or others prior to the present agency's control, a concerted effort to determine previous disposal practices by others must be made. Actions that may be taken by the present agency in their efforts to document past practices include:

- Conducting a real estate records search to determine past owners/land users.
- Interviewing senior personnel/long term area residents as to operations conducted on the land.
- Requesting other Federal agencies to conduct record searches -- to include records sent to national records retention archives when necessary.
- Reviewing site maps and other documents to determine the types of operations most probably conducted in existing/previously existing structures.

Agency management staff may not be able to satisfy the information requirements of this chapter through a review of only their records maintained on-site.

Agency Policy

Insert applicable agency policy here.

AUDIT INFORMATION SOURCE LIST

PAST DISPOSAL OF HAZARDOUS MATERIALS

Activity: Past Disposal of Hazardous Materials

Records to Review:

- RCRA Part B Permit
- National Response Center notification documentation
- Preliminary Assessment (CERCLA)
- Federal Agency property transfer contract.

Physical Features to Inspect:

- Disposal sites.

People to Interview:

- Senior Personnel
- National Response Center personnel.

PAST DISPOSAL OF HAZARDOUS MATERIALS CHECKLIST

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
RCRA Section 3005	• RCRA Part B permit includes full disclosure of all wastes within the facility, since it was originally opened and provides corrective action to abate any damage that any release of this material has caused.		
RCRA Section 3016	• Any hazardous waste site owned or operated in the past by the facility was reported to EPA or State.		
CERCLA Section 103(a)	• National Response Center was notified of a release off-site of reportable quantities under CERCLA (40 CFR Part 302) of hazardous substances.		
CERCLA Section 120(a)	• Preliminary Assessment was conducted if the facility is on the Federal Agency Hazardous Waste Compliance Docket (53 FR 4280, Feb. 12, 1988).		
CERCLA Section 120(h)	• If audited property is transfered by a Federal agency transfer, contract includes information regarding the type and quantity of hazardous substances stored for one year or more, or known to have been released or disposed of on-site.		

EMERGENCY PLANNING
COMMUNITY RIGHT-TO-KNOW

CHAPTER 11

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW

Federal Statutes

The Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), promulgated along with the Superfund Amendments and Reauthorization Act of 1986 (SARA), was designed to promote emergency planning efforts at State and local levels and provide citizens and local governments with information concerning potential chemical hazards in their communities. The Act, known as Title III, imposes requirements for facilities to provide emergency hazardous chemical release notification, chemical inventory reporting and toxic chemical release reporting. State emergency response commissions and local emergency planning committees have been appointed within each state to receive this information and to use it for chemical emergency preparation and community awareness.

Applicability

Federal facilities are not required by statute to comply with the provisions of SARA Title III because Federal agencies are not included in the definition of a "person" contained in Section 329 (7) of the Act. Some Federal agencies, however, have instituted policies requiring their facilities to comply with the intent of the law if it applies to their operations. Contractor operations are not exempted by definition under the Act and are therefore subject to the provisions of Title III.

Regulatory Scope

The major provisions of Title III include the following:

- Emergency Planning (40 CFR Part 355.30) -- establishes the State and local structure to prepare for chemical emergencies. In addition, planning requirements apply if the facility has an extremely hazardous substance on-site which exceeds its threshold planning quantity (TPQ).

- Emergency Release Notification (40 CFR Part 355.40) -- requires facilities to notify the local emergency planning committee and State emergency response commission immediately following an off-site release of a reportable quantity of extremely hazardous substance.

- Community Right-to-Know Reporting Requirements (40 CFR Part 370) -- establishes requirements for facilities to submit to State, local groups and the local fire department information provided by a Material Safety Data Sheet (MSDS) and Emergency and Hazardous Chemical Inventory (Tier 1 and 2).

- Toxic Chemical Release Reporting Emissions Inventory (40 CFR Part 372) -- establishes reporting system for notifying EPA of toxic chemical releases from designated manufacturing facilities thresholds.

State and Local Regulatory Authority

Title III gives States the authority to implement the law's requirements. It is the responsibility of each State Governor to assign an agency within the State to be responsible for receiving and compiling Title III information. Many States have enacted their own community right-to-know laws that are separate from the Federal EPCRA. State community right-to-know often have the same exemptions as EPCRA, however, the State provisions should be investigated.

Selected Management Considerations

While Federal facilities may not be required to conform with Title III by statute or agency policy, the following management recommendations are designed to facilitate quick and effective emergency response:

- Compile and maintain an inventory of the hazardous chemical substances present at the facility. The inventory could include reportable quantities and threshold planning quantities (TPQs) of each of the hazardous substances listed. This is a valuable aid for assessing the applicability of Title III regulations.

- Contact the local fire department and coordinate an exchange of information about facility operations, chemical inventories and chemical locations.

- Designate a facility representative to participate in the local emergency planning process if there are extremely hazardous substances on site.

Federal agencies may find that much of this information is being shared already with the local community emergency services units as a commonsense approach to agency disaster planning.

Agency Policy

Insert applicable agency policies here.

AUDIT INFORMATION SOURCE LIST

Activity: Emergency Planning and Community Right-to-Know

Records to Review:

- Policy establishing whether or not the agency will comply with all or portions of Title III.

People to Interview:

- Headquarters Manager of Environmental Compliance Program
- Environmental Compliance Coordinator

(A checklist for Emergency Planning and Community Right-to-Know is not provided because Federal facilities are not required by the statute to implement the provisions of Title III. Caution: obtain agency policy regarding Title III.)

PCB MANAGEMENT

CHAPTER 12

PCB MANAGEMENT

Description

The Toxic Substances Control Act (TSCA) of 1976 required EPA to regulate harmful new chemicals entering commerce and control those toxic substances already in commercial use. TSCA was enacted to reduce unreasonable risk to human health and the environment from harmful chemicals. TSCA provides a means to regulate persons who manufacture, process, distribute in commerce, use or dispose of toxic chemical substances or mixtures. Specifically, Section 6 of TSCA addresses the need to regulate polychlorinated biphenyls (PCBs). The subsequent regulations for the control of PCBs are codified in 40 CFR Part 761.

Applicability

TSCA primarily applies to manufacturers, distributors, processors and importers of chemicals. All Federal facilities, however, who own or operate any PCB items are subject to TSCA regulations. Any facility using PCBs in or for the following must be aware of the applicable regulations:

- Transformers
- Railroad transformers
- Heat transfer and hydraulic systems
- Electromagnets, switches or voltage regulators
- Circuit breakers, reclosers or cables
- Capacitors
- Pigments
- Microscopy
- Research and analysis.

All facilities distributing, processing, using, servicing, storing, disposing or formerly manufacturing PCBs or PCB items are subject to the PCB regulations discussed in this chapter.

Regulatory Scope

All regulations pursuant to TSCA controlling the use, processing, distribution, storage and disposal of PCBs are codified in 40 CFR Part 761. The regulatory requirements are:

- Applicability (40 CFR Part 761.1) -- describes the activities and substances which are subject to PCB regulations.

- Definitions (40 CFR Part 701.3) -- provides operable definitions for the PCB regulations. Important definitions are included in this section; e.g., "PCB Transformer means any transformer that contains 500 ppm PCB or greater."

- Prohibitions (40 CFR Part 761.20) -- prohibits the use of any PCB or PCB item other than in a totally enclosed manner. No person may manufacture PCBs for use within the Unites States or manufacture PCBs for export without an exemption.

- Authorizations (40 CFR Part 761.30) -- authorizes certain uses, and defines use conditions for PCBs and PCB equipment (e.g., transformers, capacitors).

- Marking (40 CFR Part 761.40) -- describes certain labeling requirements for PCBs, PCB items, and doors or means of access to PCB transformers and PCB storage for disposal areas.

- Disposal (40 CFR Part 761.60) -- lists the disposal requirements for PCBs, PCB transformers and capacitors. Identifies incineration, high efficiency boiler, and landfilling as options for disposal.

- Storage for Disposal (40 CFR Part 761.65) -- lists the storage for disposal requirements for certain PCBs and PCB items. These include container options, marking, recordkeeping and storage facility requirements.

- Incinerators (40 CFR Part 761.70) -- applies to facilities that operate incinerators for the disposal of PCBs. Describes the permit, and incinerator specifications required to be approved by EPA.

- Chemical Waste Landfills (40 CFR Part 761.75) -- applies to facilities operating landfills to dispose of PCBs.

- Decontamination (40 CFR Part 761.79) -- lists specific procedures for decontaminating PCB containers and equipment.

- PCB Spill Cleanup Policy (40 CFR Part 761.120) -- provides policy for facilities that have encountered a spill of oil containing more than 50 ppm PCBs. Spills are categorized into low and high concentration, and special instructions are provided for the clean up, verification sampling and recordkeeping.

- Recordkeeping (40 CFR Part 761.180) -- requires facilities that use or store more than 45 kg of PCBs, or one or more PCB transformers, or 50 or more large PCB capacitors, to develop and maintain records on the disposition of those items. Annual document and recordkeeping requirements are specified in this section.

State and Local Regulatory Authority

Although States do not have the authority to administer TSCA regulations, some States have declared PCB wastes a hazardous waste. These States (e.g., Rhode Island) have some control over the management of PCB wastes. For example, they may impose a shorter accumulation time and lower quantity limit on facilities storing PCBs for disposal. Additionally, States may regulate materials containing PCBs in concentrations less than the 50 ppm limit imposed by TSCA regulations. The State of Washington regulates PCB wastes containing PCBs in excess of 1 ppm.

It is essential that Federal facilities storing PCBs for disposal be familiar with the State hazardous waste regulations and the restrictions they may impose on PCB waste handling and disposal.

Selected Management Considerations

Agency management is responsible for ensuring conformance with TSCA. The following recommendations will further enhance the control of PCB-containing items and waste:

- Verify whether electrical equipment (especially transformers and including fluorescent lights) contains PCBs in excess of 50 ppm. Verification should be in the form of a gas chromatograph analysis. Maintain written verification at the facility.

- Clean up spills of PCB materials with concentrations of less than 50 ppm to the background levels required for higher concentration spills (40 CFR Part 761.125). Document spill cleanups.

- Document the intended reuse of PCBs stored for reuse on-site so auditors do not mistake the material as PCBs stored for disposal. PCB items that are stored for reuse are regulated much less stringently than those stored for disposal.

- Consider installing secondary containment for PCB-containing equipment located in sensitive areas.

- Use PCB waste minimization programs to minimize disposal costs.

Agency Policy

Insert applicable agency policy here.

AUDIT INFORMATION SOURCE LIST

PCB MANAGEMENT

Activity: PCB Management

Records to Review:

- Inspection, storage, maintenance and disposal records for PCBs/PCB items
- PCB equipment inventory and sampling results
- Correspondence with regulatory agencies concerning PCB noncompliance situations
- Annual documents.

Physical Features to Inspect:

- PCB storage areas
- Equipment, fluids and other items used or stored at the facility that contain PCBs.

People to Interview:

- Environmental Compliance Coordinator
- Facilities Manager
- Electrical Maintenance Staff.

PCB MANAGEMENT CHECKLIST

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Use of PCBs and PCB Items:		
40 CFR 761.30	• The extent of PCB use (e.g., transformers, capacitors, heat transfer systems) at the facility has been identified.		
40 CFR 761.30	• PCB large high voltage capacitors and PCB large low voltage capacitors are not being used or stored after October 1, 1988 unless they are located in a restricted access area (defined in 761.30).		
	• PCB transformers: - Are not used or stored near food, feed, or flammable items (i.e., paints, solvents, paper, etc.) - Are registered with local fire departments - Are visually inspected every 3 months, or every 12 months for a tested PCB transformer with under 60,000 ppm PCBs, or a transformer with 100% impervious, undrained containment (in spection and maintenance records retained for 3 years after the disposal of the transformer) - Any fire-related incident involving PCB transformers has been reported to the National Response Center.		

Activity: PCB Management

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 761.30	• PCB transformers located in or near commercial buildings: - Are registered with the building owner - Are removed by October 1, 1990 if network PCB transformer with higher secondary voltage - Are equipped with electrical protection if lower secondary voltage network, lower secondary voltage radial, or higher secondary voltage radial PCB transformer.		
40 CFR 761.40	• Marking and labelling requirements for PCBs and PCB items (applies only to 50 ppm or more PCBs) are met for the following: - PCB storage areas used to store PCB items for disposal (vault doors, machinery room doors, fences or other access areas) - PCB containers, whether in storage or while being used for waste collection - PCB equipment (all PCB transformers and PCB large high voltage capacitors; PCB large low voltage capacitors at time of removal) - Transport vehicles carrying PCB containers with more than 45 kg (99.4 lbs.) of liquid PCBs or at least one PCB Transformer.		

Activity: PCB Management

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 761.65	**Storage of PCB Items for Disposal:** • PCB items are inspected every 30 days for leaks. • PCB items are stored in DOT-approved containers. • Moveable equipment used to handle PCB items is decontaminated prior to leaving storage area. • Stored PCBs and PCB items are disposed of within one year from date they were placed in storage. • Storage area is managed so that PCB containers can be located by the date they are initially entered into storage. • Long-term storage facilities (between 30 days and one year) meet the following requirements: - Roof and walls of the facility prevent rainwater from reaching PCBs and PCB items - The floor has continuous curbing (minimum 6 inches) - The floor and curbing are made of continuously smooth and impervious materials such as Portland cement or steel - Containment volume of the facility equals or exceeds twice the internal volume of the largest		

Activity: PCB Management

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	PCB article or container or 25 percent of the total internal volume of all PCB items, whichever is greater - The storage facility is located above the 100-year floodplain - The facility has no floor drains, cracks or openings. • PCB items at 50-500 ppm temporarily stored (less than 30 days) in areas not meeting the above requirements: - Have a notation indicating the date they were taken out of service and put into storage - Are not stored for more than 30 days - Have an SPCC plan for containers of liquid PCBs at 50-500 ppm - Have a notation on liquid storage containers indicating that the concentration of PCBs does not exceed 500 ppm PCB.		
40 CFR 761.79	• PCB containers are decontaminated in the following manner: - Containers are flushed three times with a solvent that contains less than 50 ppm PCBs		

Activity: PCB Management

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	- The solubility of PCBs in the solvent is 5 percent by weight - Each rinse is approximately 10 percent of the volume of the PCB container - The solvent rinse is disposed of in accordance with PCB disposal requirements (40 CFR 761.60)		
40 CFR 761.60	• PCB-contaminated waste (containing 50 ppm or more PCBs) is disposed of at an EPA-approved incinerator, high efficiency boiler or landfill.		
	Inspection, Storage and Disposal Records:		
40 CFR 761.180	• An annual document is prepared and maintained on file at the facility if the facility stores at least 45 kg (99.4 lbs.) of PCBs during the year, has one or more PCB transformers, or has 50 or more large PCB capacitors. The report contains the following information: - Dates when PCB item is removed from service, placed in storage, or placed into transport for disposal - Total number of PCB transformers and total weight of PCBs they contain - Total number of PCB large high voltage and large low voltage capacitors.		

Activity: PCB Management

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• Records contributing to the document are maintained at the facility for at least 5 years after the facility ceases to use or store PCB items.		
No citation	**Records Referenced in Other Parts:**		
	• Records of quarterly visual inspection and maintenance history for PCB transformers are maintained by the facility, including transformer location, and dates of visual inspection, repair, cleanup, or discovery of a leak. (See Part 761.30)		
	• Records of PCB transformer registration with the local fire response personnel. (See Part 761.30)		
	• Records of monthly visual inspection of the PCB storage for disposal area. (See Part 761.65)		
	• Records of weekly visual inspection of temporary or interim PCB storage for disposal area. (See Part 761.65)		
	• Records are readily available for inspection.		
	PCB Spills/Cleanup:		
40 CFR 761.120,125	• PCB cleanup is conducted in accordance with regulations and EPA guidance.		
	• Record certifying that an area has been decontaminated, is maintained at the facility for 5 years following decontamination.		

Activity: PCB Management

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• PCB spills or leaks which occurring after May 4, 1987 are reported to the EPA Regional Administrator within 24 hours and to the National Response Center if: - The spill contains 50 ppm or more PCBs and involves more than 10 lbs. of PCB-fluid (i.e., one gallon of PCB dielectric fluid), or - The spill directly contaminates surface waters, sewers, drinking water supplies, or grazing lands, or - The extent or volume of the spill is unknown (such as spills that enter the drainage system), or - People come into direct and uncontrolled contact with the spill.		

PESTICIDES

CHAPTER 13

PESTICIDES

Federal Statutes

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) was enacted in 1947 and amended by the Federal Environmental Pesticide Control Act of 1972, which shifted the emphasis of the legislation from safeguarding the consumer against fraudulent pesticide products to the protection of public health and the environment. FIFRA was further amended in 1975, 1978, and 1980 during reauthorization. Under FIFRA, EPA is responsible for the registration of new pesticides and the reregistration of all existing pesticides to ensure that, when used according to label directions, they will not present unreasonable risks to human health or the environment. FIFRA regulations apply to persons who manufacture, market, formulate, distribute, use or dispose of pesticides.

Applicability

All Federal government agencies are required to comply with the regulations specified in FIFRA. Section 18, Exemption of Federal Agencies, states that the Administrator may exempt any Federal or State agency from any provision of FIFRA if EPA determines that existing emergency conditions warrant such an exemption. In addition, under Section 4, a Federal agency, with EPA approval, may establish its own certification program for applicators of restricted use pesticides to enable Federal employees to apply such pesticides.

Outside of these special circumstances, however, all Federal facilities formulating, distributing, using, storing or disposing of pesticides are subject to FIFRA regulations. Areas covered include:

- All Federal buildings and grounds
- Research stations
- National parks, wilderness areas, and other public land
- Areas in the vicinity of public roads, electric power lines, pipelines, and railway rights-of-way
- Public health programs
- Pesticide demonstration and research programs
- Products developed by the Federal Government that contain FIFRA-regulated materials.

Regulatory Scope

Pesticide regulations applicable to Federal facilities are found at 40 CFR Parts 150-180. The following regulations require attention by a Federal facility:

- Good Laboratory Practices Standards (40 CFR Part 160) -- prescribes good laboratory practices for conducting studies in support of applications for pesticide registration or experimental use permits. Outlines regulatory requirements for organization and personnel, facilities, equipment, testing facilities, operation, test and control substances, protocols and conduct, and records and reports.

- Disposal and Storage of Pesticides (40 CFR Part 165) -- specifies the regulations and procedures for the disposal or storage of pesticides, pesticide containers, and pesticide-related wastes, and for the acceptance for safe disposal by EPA of pesticides whose registration has been cancelled.

- Exemption of Federal and State Agencies for Use of Pesticides Under Emergency Conditions (40 CFR Part 166) -- describes four types of emergency exemptions for Federal and State agencies which may be authorized by EPA: specific, quarantine, public health, and crisis.

- Worker Protection Standards for Agricultural Pesticides (40 CFR Part 170) -- specifies occupational safety and health standards ("reentry times") for all persons performing hard labor operations in fields after ground (other than soil incorporation), aerial, or other types of pesticide application. Authorizes State regulatory agencies to set and enforce standards more restrictive than Federal standards.

- Certification of Pesticide Applicators (40 CFR Part 171) -- outlines the requirements for applicators of restricted use pesticides. Includes the categorization of commercial applicators, standards for certification of commercial and private applicators and supervision of noncertified applicators, submission and approval of State plans for applicator certification programs, maintenance of State plans, submission and approval of government agency plans, certification of applicators on Indian Reservations, and Federal certification of applicators in States or on Indian Reservations without an approved certification plan in effect. Deficiencies in application procedures or applicator training programs may result in adverse effects on human health or the environment.

- Experimental Use Permits (40 CFR Part 172) -- outlines the requirements for Federal or State issuance of Experimental Use Permits (EUPs) to persons wishing to accumulate data necessary to support the registration of either a new pesticide or a particular use of a pesticide not previously approved in the registration of that pesticide. Includes regulations governing authorization by EPA of State EUP programs.

There are many pesticides or certain uses of particular pesticides for which registration has been suspended or cancelled. The facility should refer to Suspended, Cancelled and Restricted Pesticides, EPA, Office of Pesticides and Toxic Substances, January 1985, 3rd Revision.

State and Local Regulatory Authority

The 1972 amendments to FIFRA authorized "cooperative enforcement agreements" between EPA and the States. In the 1972 amendments, the States were given primary enforcement responsibility for pesticide use violations, subject to oversight by EPA.

Through cooperative enforcement agreements, all States, with the exception of Nebraska and Wyoming, have assumed primary enforcement responsibility. Restricted use pesticide applicator certification and training programs are also conducted by the States, except in Colorado, which has a program only for commercial applicators, and in Nebraska, where EPA conducts the certification program. The State agency with lead responsibility for pesticides, generally the State Department of Agriculture, handles all reports of pesticide misuse or accidents.

Selected Management Considerations

Federal agencies using pesticides should consider developing pesticide management techniques that protect non-target species and their habitats, particularly endangered species.

Agency Policy

Insert applicable agency policies here.

AUDIT INFORMATION SOURCE LIST

PESTICIDES

Activity: Pesticides

Records to Review:

- Records of pesticides purchased by the facility (purchase orders, inventory)
- Pesticide application records
- Description of the facility's pest control program
- Certificates of applicators of restricted-use pesticides
- Facility applicator certification and training program, including documentation of Federal approval of the program
- Pesticide disposal manifests
- Pesticide experimental use permits (EUP) granted to the Federal agency
- Records of pesticide use under all EUP's, including statements of compliance with Good Laboratory Practice Standards
- Any emergency exemption granted to the Federal agency by EPA.

Physical Features to Inspect:

- Pesticide storage areas, including storage containers
- Pesticide research facilities, including laboratories, greenhouses, and test plots.

Personnel to Interview:

- Pesticide applicators (certified and non-certified)
- Administrator of facility's pest control program.

PESTICIDES CHECKLIST

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Pesticide Use:		
40 CFR 162.2	• All pesticides purchased are registered by the manufacturer.		
40 CFR 162.10, 30, 31	• Such pesticides are used in accordance with label directions.		
40 CFR 162.31, 171	• A restricted-use pesticide is applied only by an applicator currently certified to apply the pesticide by a Federal or an approved State or government agency certification program, or by a noncertified applicator under the direct supervision of a certified applicator.		
40 CFR 171.3	• Applicator is certified in the appropriate category or categories of commercial applicators in which the restricted-use pesticide is intended for use.		
40 CFR 164	• A pesticide the registration, which has been suspended, cancelled, or restricted (not to be confused with restricted-use pesticide) under 40 CFR 164, is applied in accordance with the "Action" section for the particular pesticide listed in Suspended, Cancelled, and Restricted Pesticides, EPA, Office of Pesticides and Toxic Substances, Jan. 1985, 3rd Revision.		

Activity: Pesticides

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 170	• Worker protection standards are met during all hand labor operations in fields following the application of agricultural pesticides on Federal land and/or in Federally-sponsored pesticide application programs.		
	Experimental Use Pesticides:		
40 CFR 172	• A facility conducting research to support the registration of either a new pesticide or a new use of a registered pesticide has a Federally issued experimental use permit (EUP).		
40 CFR 172	• The facility is operating in accordance with the EUP.		
40 CFR 160	• All pesticide research conducted to support applications for research or marketing permits, including research to support applications for pesticide registration and experimental use permits, is conducted in compliance with Good Laboratory Practice Standards.		
	Pesticide Storage:		
40 CFR 162.10	• Labels on pesticide containers meet labeling requirements.		
40 CFR 165.10	• Pesticides classified as highly or moderately toxic, as well as empty containers of such pesticides are stored in accordance with pesticide storage requirements.		

Activity: Pesticides

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Pesticide Disposal:		
40 CFR 165.7	• A pesticide that is disposed of in a manner other than the procedure used to apply the pesticide is **NOT** disposed of by open dumping, open burning, or in a manner that is inconsistent with its labeling.		
40 CFR 165.8	• An organic or metallo-organic pesticide (not including organic mercury, lead, cadmium, and arsenic compounds), if disposed of onsite, is disposed of according to recommended procedures for these types of pesticides.		
40 CFR 165.8	• A pesticide containing organic mercury, lead, cadmium, or arsenic, or any inorganic pesticide, if disposed of onsite, is disposed of according to recommended procedures for these types of pesticides.		
40 CFR 165.9	• Pesticide containers and pesticide-related waste (residues) are disposed of according to recommend procedures.		
	Exemption from FIFRA Regulations:		
40 CFR 166	• Facility **NOT** operating in compliance with FIFRA regulations has been granted an emergency exemption by EPA.		

RADIOACTIVE MATERIALS

CHAPTER 14

RADIOACTIVE MATERIALS

Federal Statutes

The major laws pertaining to the use of radioactive materials include the Atomic Energy Act, Uranium Mill Tailings Radiation Control Act, Low-Level Waste Policy Act and Nuclear Waste Policy Act. A brief description of each act follows:

- The Atomic Energy Act (AEA) establishes a program of Federal regulation of atomic energy and materials, including source, special nuclear and byproduct material. (This protocol only addresses byproduct materials.) The Act includes protection of the public from radiation exposure.

- The Uranium Mill Tailings Radiation Control Act (UMTRCA) requires proper disposal of uranium mill tailings and uranium byproduct materials. It is an amendment to the AEA.

- The Low-level Waste Policy Act (LLWPA) establishes the disposal of low-level radioactive materials as a State responsibility and encourages the formation of intrastate compacts to manage low-level waste on a regional basis.

- The Nuclear Waste Policy Act (NWPA) provides for the development of repositories for the disposal of high-level radioactive waste (HLW) and spent nuclear fuel, and establishes a program of research, development and demonstration regarding the disposal of high-level waste and spent nuclear fuel.

In addition to those acts noted above, the Clean Air Act addresses airborne radionuclide emissions, and the Safe Drinking Water Act limits radioactivity in community water systems. Limits provided for in these acts are not restricted to byproduct materials.

Applicability

Regulations pursuant to the acts discussed above apply to many types of Federal operations, such as:

- Uranium foundry and operations

- Nuclear weapons research and development

- Nuclear weapons activities

- Nuclear reactors for research or power generation

- Laboratory/research/field operations using byproduct radioactive sources, standards or samples

- Radiographic operations

- Medical practices involving radiation.

All Federal facilities using, storing or disposing of byproduct radioactive materials must be aware of the applicable regulations and license provisions. Both specific and general license for use of radioactive materials may be applicable to Federal agency operations.

Regulatory Scope

The following environment, health and safety regulations are promulgated pursuant to the AEA:

- Notices, Instructions, and Reports to Workers (10 CFR Part 19) -- establishes requirements for handling radioactive material, including posting of notices to workers, instructions to workers, and workers rights to the results of monitoring data.

- Standards for Protection Against Radiation (10 CFR Part 20)-- establishes permissible doses levels and concentrations of radiation, precautionary procedures, and waste disposal procedures; also addresses licensed activities.

- General Requirements for Byproduct Materials (10 CFR Part 30) -- describes general provisions, exemptions, and licenses for byproduct material.

- General Domestic Licenses for Byproduct Material (10 CFR 31) -- authorizes users to transfer, receive, acquire, own, possess and use byproduct material incorporated into certain devices and equipment.

- Waste classification (10 CFR Part 61.55) -- establishes the classes used for identifying and labelling radioactive waste.

- Packaging and Transportation of Radioactive Material (10 CFR 71) -- provides general provisions applicable to individuals who package licensed byproduct material and arrange for transport off-site.

- Environmental Radiation Protection Standards for Nuclear Power Operations (40 CFR Part 190) --

- Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-level and Transuranic Radioactive Wastes (40 CFR Part 191)

In addition, the UMTRCA is implemented by the health and environmental protection standards for uranium mill tailings (40 CFR Part 192).

The EPA and the NRC have an on-going joint effort to regulate low-level radioactive waste. The proposed regulation includes:

- (48 FR 39563) -- on August 31, 1983, EPA published its intent to develop standards for low-level radioactive waste disposal, and to determine, if possible, some limit of exposure from the disposal of radioactive waste below which radiation-related regulation is not warranted.

- (52 FR 11147) -- on April 7, 1987, EPA and NRC provided guidance to NRC licenses on the definition and identification of commercial mixed low-level waste. This is defined as waste that:

  -- Satisfies the definition of low-level radioactive waste (LLW) in the Low-Level Radioactive Waste Policy Amendments Act of 1985 (detailed in 10 CFR Part 61.2), that is, radioactive waste not classified as HLW, transuranic waste, spent nuclear fuel, or byproduct material as defined in Section 11(e)(2) of the AEA (uranium or thorium tailings and waste; and

  -- Contains hazardous waste that is listed in RCRA regulation 40 CFR Part 261 Subpart D or exhibits a hazardous waste characteristic as described in 40 CFR Part 261 Subpart C.

State and Local Regulatory Authority

The EPA established provisions for State regulatory authority over the commercial uses, licensing, and disposal of byproduct radioactive materials. Sovereign immunity, however, protects Federal facilities from State and local regulations. Therefore, State and local requirements do not govern the management of nuclear material at Federal facilities.

Selected Management Considerations

Agency management is responsible for knowing and complying with the applicable regulations for the radioactive materials it uses or the waste it generates. Since mixed-LLW must currently be managed and disposed of in compliance with both EPA and NRC regulations, there is a benefit for facilities to minimize the generation of mixed-LLW through management practices such as waste segregation, materials substitution and materials tracking.

Mixed-LLW temporarily stored to reduce the level of radioactivity prior to disposal or treatment retains the mixed-LLW designation regardless of the levels of radioactivity; even if below regulatory concern. A Federal facility should not exceed hazardous waste storage time or quantity limits due to storing for the purpose of radioactivity reduction.

Agency Policy

Insert applicable agency policies here.

AUDIT INFORMATION SOURCE LIST

Activity: Radioactive Materials

Records to Review:

- Equipment calibration inspection records
- Credentials of dosimetry processor
- Specific license and amendments
- General license reference
- Forms used to record rad dose
- Inventory of byproduct material
- Required postal documents
- Minutes of radiation safety committee
- Procedures for procurement of byproduct material
- NRC and State inspection records

Physical Features to Inspect:

- Restricted areas
- Radioisotope storage and disposal areas
- Laboratory equipment

People to Interview:

- Radiation Safety Officer
- Facilities Manager
- One or more of the authorized users.

RADIOACTIVE MATERIALS CHECKLIST

Facility:_____ Auditor:_____ Date:_____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
10 CFR 19	• Facility using byproducts has special license for quantity on site and use.		
	Notices to Workers:		
10 CFR 19.11	• Current copies of the following documents are posted for the information of workers: - Form NRC-3, "Notice to Employees" - Title 10 CFR Parts 19 and 20 - The license, license conditions or documents incorporated into a license by reference, and amendments thereto - The operating procedures applicable to the licensed activities - Any notice of violation involving radiological working conditions and any response from the licensee or, a notice is posted which describes these documents and states where they may be examined. • The postings appear in a sufficient number of places to enable workers to observe them on the way to or from licensed activities. • Documents pertaining to violations of the license are posted within two days of availability and remain posted for five days or until the violation has been corrected, whichever is later.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Instructions to Workers:		
10 CFR 19.12	• Workers in or frequenting a restricted area are: - Informed of storage, transfer and use of radioactive materials and radiation in the area - Instructed in: health protection; precautions or procedures to minimize exposure; purposes and functions of protective devices; their responsibility to report license violations; the appropriate response to warnings of unusual conditions; and the radiation exposure reports they may request.		
	Reports to Workers:		
10 CFR 19.13	• Radiation exposure data for an individual, to include any measurements, analyses and calculations of radioactive material deposited in the body, are reported to the individual in writing. • The report includes the statement that the report is furnished under the provisions of 10 CFR 19 and that the report should be preserved for future reference. • The licensee, upon request, advises each worker annually of exposure to radioactive materials or radiation as shown in the license records.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Inspections:		
10 CFR 19.16	• Workers are aware that they may write to the NRC for an inspection when they believe that a violation of the Atomic Energy Act, 10 CFR 19, or the license provisions has occurred in their licensed activity.		
	• They are also aware that, upon their request, their name will not be furnished to their employer except for good cause shown.		
	Permissible Doses, Levels and Concentrations:		
10 CFR 20.101	• A record of each radiation worker's accumulated occupational dose to the whole body is maintained on Form NRC-4 or on a record containing all of the information contained in the Form NRC-4.		
10 CFR 20.102	• Records used in preparing Form NRC-4 are retained and preserved until the NRC authorizes their disposition.		
10 CFR 20.103	• Where employees may be exposed to airborne concentrations of radioactive materials in restricted areas, the licensee has implemented suitable air measurements and, as appropriate, other methods for detecting and determining intakes of radioactivity.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• Records of occurrences, evaluations, and actions taken are maintained in a clear and readily identifiable form for summary review and evaluation. • Respiratory protective equipment used to limit the inhalation of airborne radioactive material is certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration. • The respiratory protection program includes: - Air sampling sufficient to identify the hazard, permit proper equipment selection and estimate exposures - Surveys and bioassays to evaluate actual exposures - Written procedures regarding selection, fitting and maintenance of respirators, and testing of respirators for operability prior to each use - Written procedures regarding supervision and training of personnel and issuance records - Determination by a physician prior to initial use and at least every 12 months thereafter that the individual is physically able to use the respiratory protective equipment. • The facility has issued a written policy statement on respirator usage.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• Only equipment that has been specifically certified or had certification extended for emergency use by NIOSH/MSHA is used as emergency devices.		
10 CFR 20.104	• Precautions are in place to preclude exposures in excess of 10 percent of 10 CFR 20 standards to individuals under 18 years of age.		
10 CFR 20.105	• Above-background levels of radiation in unrestricted areas are addressed in the license.		
10 CFR 20.106	• Monitoring is conducted to ensure that excessive radioactivity contained in air and water effluents is not released to unrestricted areas.		
	Precautionary Procedures:		
10 CFR 20.201	• Surveys are conducted to evaluate radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials.		
10 CFR 20.202	• Appropriate personnel monitoring equipment is provided and used by: - Individuals entering a restricted area who are likely to receive a dose in excess of 25 percent of the applicable limit - Individuals under 18 years of age entering a restricted area who are likely to receive a dose in excess of 5 percent of the applicable limit		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
10 CFR 20.203	- Each individual who enters a high radiation area. • Personnel dosimeters that require processing to determine the radiation dose are processed and evaluated by a dosimetry processor: - Currently accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Bureau of Standards - Approved by the NVLAP for the type of radiation being monitored. • Each radiation area is conspicuously posted with a sign bearing the radiation caution symbol and the words: Caution Radiation Area • Each high radiation area is conspicuously posted with a sign bearing the radiation caution symbol and the words: Caution High Radiation Area		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• Entrances to high radiation areas either remain locked except when entrance is required or are equipped with controls to: - Limit exposure of entering personnel to prescribed limits, or - Energize a conspicuous visible or audible alarm to signal entry by personnel. • Areas containing airborne radioactivity are posted with a sign bearing the radiation caution symbol and the words: Caution Airborne Radioactivity Area • Areas[1] in which licensed material is used or stored and which contains any radioactive material in an amount exceeding 10 times the amount specified in Appendix C, 10 CFR 20, are posted with a sign bearing the radiation caution symbol and the words: Caution Radioactive Material(s)		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	- Containers of licensed material bear a durable, clearly visible label identifying the radioactive contents. - The label bears the radiation caution symbol and the words: Caution Radioactive Material or Danger Radioactive Material - Information is provided to allow individuals to take precautions to avoid or minimize exposures. • The labels of empty uncontaminated containers are removed or defaced prior to the container being moved to unrestricted areas.		
10 CFR 20.204	• Exceptions to the posting of signs are in accordance with the provisions of 10 CFR 20.204 or the applicable byproduct material license.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
10 CFR 20.205	• Procedures have been established and implemented to: - Receive shipments of radioactive material at the facility when offered for delivery by the carrier, or - Receive notification from the carrier of shipment arrival and to make arrangements to pick-up shipments expeditiously at the carrier's terminal - Monitor the external surfaces of the package for radioactive contamination caused by leakage of the radioactive contents, when appropriate, within three hours of receipt during normal working hours or eighteen hours of receipt if received after normal working hours - Monitor the radiation levels external to the package, when the shipment contains radioactive material in quantities in excess of the Type A quantities specified in 10 CFR 20.205, within three hours of receipt during normal working hours or eighteen hours of receipt if received after normal working hours - Immediately notify the carrier and the NRC Regional Office when: removable radioactive contamination in excess of 0.01 microcuries per 100 square centimeters of package surface is found on the external surfaces of the package;		

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	or radiation levels on the package external surface exceed 200 millirem per hour; or exceed 10 millirem per hour at three feet from the external surface of the package - Safely open packages in which licensed material is received.		
10 CFR 20.207	• Licensed materials stored in an unrestricted area are secured to prevent unauthorized removal. • Licensed materials in an unrestricted area but not in storage are under constant surveillance and immediate control of the licensee.		
	Waste Disposal:		
10 CFR 20.301	• Licensed material is disposed of only: - By transfer to an authorized recipient, or - As authorized in the radioactive material license, or - By authorized release into the sanitary sewerage system, or - As authorized by 10 CFR 20.106, or 10 CFR 20.306.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
10 CFR 20.303	• Licensed material discharged to the sanitary sewerage system is readily soluble/dispersible in water, and does not exceed: - The quantity in any one day which, if diluted by the average daily quantity of sewage released into the sewer by the licensee, will result in an average concentration equal to the limits specified in Appendix B, 10 CFR 20, or ten times the quantity of such material specified in Appendix C, 10 CFR 20 - The quantity in any one month which, if diluted by the average monthly quantity of water released by the licensee, will not result in an average concentration exceeding the limits specified in Appendix B, 10 CFR 20 - One curie per year (excluding hydrogen-3 and carbon-14) - Five curies per year for hydrogen-3 and one curie per year for carbon-14.		
10 CFR 20.305	• Treatment or disposal of licensed material by incineration is limited to materials: - Listed under 10 CFR 20.306, or - Specifically approved by the NRC as listed in the activity's radioactive material license.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
10 CFR 20.306	• When disposing of 0.05 microcuries or less of hydrogen-3 or carbon-14, per gram of medium, used for scintillation counting and per gram of animal tissue averaged over the disposed weight of the animal, records are maintained showing the receipt, transfer and disposal of such by-product material.		
10 CFR 20.311	• Each shipment of radioactive waste to a licensed land disposal facility is accompanied by a manifest that contains the following: - Name, address and telephone number of the person generating the waste, and - Name, address and telephone number or the name and EPA hazardous waste identification number of the person transporting the waste to the land disposal facility - Physical description of the waste, the volume, radionuclide identity and quantity, the total radioactivity, the principle chemical form, and the solidification agent - Certification by the generator that the materials are properly classified, described, packaged, marked and labeled and in proper condition for transportation - Date and signature of an authorized representative of the generator.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• Waste is transferred to a land disposal facility or a licensed waste collector only after: - Classified according to 10 CFR 61.55 criteria and meeting the waste characteristics requirements in 10 CFR 61.56 - Labeled to identify whether it is Class A, B or C waste - Manifested according to requirements of 10 CFR 20.311. • For wastes transferred to a land disposal facility, a licensed waste collector or to a licensed waste processor who treats or repackages waste, a copy of the manifest is: - Forwarded to the intended recipient at the time of shipment - Provided to the collector at time of collection, obtaining acknowledgement of receipt from the collector - Included with the shipment - Retained as the record of transfer of licensed material (along with documentation of receipt).		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• For these wastes: - A trace investigation is conducted for any ship ments or any part of a shipment when ac knowledgement of receipt has not been received within 20 days after transfer of the waste - A written report is filed with the nearest NRC Regional Office within two weeks of completion of a trace investigation.		
10 CFR 20.401	**Records, Reports and Notification:** • The results of personnel monitoring for radiation exposure are maintained on Form NRC-5, or equivalent other form, with doses entered for periods of time not exceeding one calendar quarter. • The records of individual exposures are preserved until the NRC authorizes disposition. • Records of the results of surveys and monitoring are preserved for two years after completion of the survey. • Records of the results of surveys to determine compliance with 10 CFR 20.103, to determine external radiation dose in the absence of personnel monitoring data, and to evaluate the release of radioactive effluents to the environment are maintained until the NRC authorizes disposition. • Records of disposal of licensed materials are maintained until the NRC authorizes disposition.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
10 CFR 20.402	• The NRC Regional Office is phoned immediately when theft or loss of licensed material occurs in such quantities and if substantial hazard may result to persons in unrestricted areas. • The telephone call is followed within 30 days with a written report containing the information described in 10 CFR 20.402. • The names of individuals who may have received exposure to radiation are stated in a separate part of the report.		
10 CFR 20.403	• The facility has established procedures for reporting incidents to the NRC.		
10 CFR 20.405	• The facility has established procedures for reporting overexposures, excessive levels of radiation and excessive concentrations of radioactive materials to the NRC.		
	Licensing of Byproduct Material:		
10 CFR 30.3	• Byproduct material in the facility is authorized by either a general or specific license issued pursuant to the regulations in 10 CFR 30 through 35 and 39.		
10 CFR 30.7	• For facilities having specific licenses, Form NRC-3, "Notice to Employees" is posted on the premises in sufficient locations to permit protected employees to observe a copy on their way to or from their place of work.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Licenses:		
10 CFR 30.34	• Possession and use of licensed byproduct material is confined to the location and purposes authorized in the license.		
10 CFR 30.36	• Application for license renewal or notification of intent not to renew a license was submitted no less than 30 days before the expiration date specified in the specific license.		
	• If the license is expired, the following actions were taken on or before the expiration date: - Use of byproduct material was terminated - Radioactive contamination was removed to the extent practicable - Byproduct material was disposed of properly - Form NRC-314 was submitted to the NRC Regional Office - A radiation survey report was submitted to the NRC to confirm the absence of radioactive materials or to establish the levels of residual radioactive contamination - A plan for decontamination, if required, was submitted to the NRC.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	• Access to restricted areas remained controlled until the NRC notified the facility that the license was terminated and that the areas were suitable for release for unrestricted use.		
10 CFR 30.41	• Before transferring byproduct material to a specific licensee, the facility verified that the transferee's license authorized the receipt of the type, form, and quantity of byproduct material.		
	Records, Inspections, Tests, and Reports:		
10 CFR 30.51	• Records showing the receipt, transfer and disposal of licensed byproduct material are maintained as follows: - Receipts are maintained during possession and for two years following transfer or disposal - Transfer records are maintained for five years after the transfer - Disposal records are maintained as prescribed in 10 CFR 20.401(c).		
	Licenses for Byproduct Material		
10 CFR 31.5	• Measuring, gauging and controlling devices are operated under the following conditions: - Labels, bearing the statement that removal is prohibited, are not removed		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	- Instructions and precautions provided on the labels are implemented - The device is tested for leakage and proper operation of the on-off mechanism and indicator, if any, at no longer than six-month intervals or as indicated on the label - Testing, installation, servicing, and removal from installation involving the radioactive material, its shielding or containment are performed either in accordance with label instructions or by a person holding a specific license to perform such activities - Records are maintained as specified in 10 CFR 31.5 - Upon failure of or damage to the shielding or on-off mechanism or upon detection of 0.005 microcurie or more of removable radioactive material, the device is removed from service until: repaired by the manufacturer or person holding a specific license for repairs; or disposed of by transfer to a person holding a specific license to receive the material contained in the device - Such failure, damage or leakage is reported to the NRC Regional Office within 30 days		

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	- The device is not abandoned - Transfer or disposal of the device is only by transfer to a person having a specific license to receive the device - Such transfer, unless to receive a replacement device, is reported to the NRC Regional Office within 30 days.		
	Packaging and Transportation of Radioactive Material:		
10 CFR 71.0	• The facility staff considers the requirements of 10 CFR Parts 20, 21, 30, 39, 40, 70, 71 and 73, as appropriate, during packaging and transport of licensed material.		
10 CFR 71.5	• Shipments of licensed material conform to Department of Transportation (DOT) regulations in 49 CFR Parts 170 through 189, especially regarding the noted regulations for the following areas and modes of transportation: - Packaging - 49 CFR Part 173, Subparts A and B and Parts 173.401 through 173.478 - Marking and Labeling - 49 CFR Part 172, Subpart D and Parts 172.400 through 172.407 and 172.436 through 172.440 - Placarding - 49 CFR Parts 172.500 through		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	172.519, 172.556 and Appendices B and C - Monitoring - 49 CFR Part 172, Subpart C - Accident Reporting - 49 CFR Part 171.15 and 171.16 - Shipping Papers - 49 CFR Part 172, Subpart C - Rail - 49 CFR Part 174, Subparts A-D and K - Air - 49 CFR Part 176, Subparts A-D and M - Vessel - 49 CFR Part 176, Subparts A-D and M - Public Highway - 49 CFR Part 177.		
10 CFR 71.43	• Packages meet the standards contained in 10 CFR 71.43.		
10 CFR 71.47	• External radiation levels for packages meet the standards prescribed in 10 CFR 71.47.		
	Manufacture or Transfer of Certain Items Containing Byproduct Material:		
10 CFR 32	• A facility introducing byproduct material, in exempt concentrations, into products or materials and transferring ownership or possession to others complies with the provisions of 10 CFR Parts 32 and 30.		

Activity: Radioactive Materials

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Radiographic Operations:		
10 CFR 34	• A facility using sealed sources containing byproduct material to conduct radiographic operations complies with the provisions of 10 CFR Parts 34 19, 20, 21, and 30.		
	Medical Use of Byproduct Material:		
10 CFR 35	• A facility using licensed byproduct material for medical purposes complies with the requirements and provisions of 10 CFR Parts 35, 19, 20, 21, 30, 71 and 170 unless specifically exempted.		
	Well Logging:		
10 CFR 39	• A facility using licensed byproduct materials such as sealed sources, radioactive tracers, radioactive markers, and uranium sinker bars in well logging in a single well complies with the requirements and provisions of 10 CFR Parts 39, 19, 20, 21, 30, 40, 70, 71, and 150.		
	Production and Utilization Facilities:		
10 CFR 50	• A facility operating a production and utilization facility[2] under the provisions of either a Class 103, for commercial or industrial facilities, or Class 104, for medical therapy and research and development facilities, license complies with the requirements and provisions of 10 CFR Part 50.		

ENVIRONMENTAL NOISE

CHAPTER 15

ENVIRONMENTAL NOISE

Federal Statutes

The Noise Control Act of 1972 established that Federal agencies, when engaged in an activity resulting in the emission of noise, should comply with Federal, State, interstate, and local requirements respecting control and abatement of environmental noise to the same extent as private entities. Even though the primary operational interest of this legislation, as well as of the Aviation Safety and Noise Abatement Act, is directed to aircraft and airports, the principles involved are applicable to any Federal agency operating equipment which produces noise sufficient to result in noncompatible land uses in the surrounding community. Thus, for most Federal agencies, the primary regulations of interest are those promulgated by State and local governments in whose jurisdiction the agency's facilities are located.

In the Noise Control Act of 1972, Congress noted:

- "...inadequately controlled noise presents a growing danger to the health and welfare of the Nation's population, particularly in urban areas.
- "...the major sources of noise include transportation vehicles and equipment, machinery, appliances, and other products in commerce.
- "...while primary responsibility for control of noise rests with state and local governments, Federal action is essential to deal with major noise sources in commerce control of which require national uniformity of treatment."

This Federal legislation primarily focuses on interstate conduct of commerce, such as:

- Noise producing products
- Aircraft noise and sonic booms
- Railroad and motor carrier noise
- Promotion of effective state and local noise control programs.

The Act exempts Federal agencies from following these "product" environmental noise requirements for the following items:

- Military weapons or equipment designed for combat use
- Rockets or equipment designed for research, experimental, or developmental work for the National Aeronautics and Space Administration
- Other machinery or equipment designed for use in experimental work done by or for the Federal government.

Exemption from product labeling does not exempt the equipment from being operated in conformance with State and local environmental noise requirements.

The Aviation Safety and Noise Abatement Act is intended primarily to provide assistance to airport operators to prepare and carry out noise compatibility programs. The Act provides a mechanism for airport operators to develop a noise exposure map and accompanying documentation relating noncompatible land uses, because of the environmental noise impact of aircraft operations, to the area surrounding the airport. When approved by the Secretary of Transportation and made available to the public, the map and documentation provide a degree of protection from subsequent area land owners seeking damages for noise attributable to the airport operations.

The map and documentation do not preclude claims for present damages. The Act does provide, however, that the map and documentation cannot be used as evidence in a suit seeking damages or other relief for noise that results from the operation of an airport.

Applicability

Federal agencies whose activities result in increased environmental noise in the surrounding community are responsible for compliance with State and local environmental noise regulations. Examples of these activities include:

- Aircraft operations related to agency test flights, airports and flight operation sites
- Weapon, rocket and missile firing ranges
- Test tracks for vehicles
- Outdoor power generating equipment
- Demolition and explosive disposal sites.

The operating Federal agency is responsible for studies necessary to determine the impact of environmental noise on the surrounding community and for making the community aware of those impacts.

Regulatory Scope

Environmental noise legislation establishes State and local government as the primary regulatory source. The Federal Aviation Agency is the primary program office of concern.

State and Local Regulatory Authority

State and local regulations on environmental noise vary too widely in scope and degree for any generic use by Federal agencies in determining compliance for a specific operation at a specific site. As a general rule, States tend to treat environmental noise as a source-specific pollutant whose emission will be controlled depending on the community area specifically affected.

The Minnesota Pollution Control Law provides an example of the state approach taken to control environmental noise:

- Standards will be adopted "describing the maximum levels of noise in terms of sound pressure level which may occur in the outdoor atmosphere, recognizing that due to variable factors no single standard of sound pressure is applicable to all areas of the State.

- "Such standards shall give due consideration to such factors as the intensity of noises, the types of noises, the frequency with which noises recur, the time period for which noises continue, the times of day during which noises occur, and such other factors as could affect the extent to which noises may be injurious to human health or welfare, animal or plant life, or property or could interfere unreasonably with the enjoyment of life or property."

- Due recognition will be given to the fact that "the quantity or characteristics of noise or the duration of its presence in the outdoor atmosphere, which may cause noise pollution in one area of the state, may cause less or not cause any noise pollution in another area of the state, and it shall take into consideration in this connection such factors, including others which it may deem proper, as existing physical conditions, zoning classifications, topography, meteorological conditions and the fact that a standard which may be proper in an essentially residential area of the state, may not be proper as to a highly developed industrial area of the state.

- "Such noise standards shall be premised upon scientific knowledge as well as effects based on technically substantiated criteria and commonly accepted practices.

- "No local governing unit shall set standards describing the maximum levels of sound pressure which are more stringent than those set by the pollution control agency."

In this example, the scope of these criteria for developing environmental noise standards establishes the need for Federal agencies to couple site-specific impacts of environmental noise with State and local regulations to determine the compliance status of a facility.

Selected Management Considerations

It is the intent of the Noise Control Act of 1972 that Federal agencies consider the impact of environmental noise on the surrounding community. The key concerns of a Federal agency's response to noise are:

- To protect the safety and health of the local community

- To prevent degradation of the agency's capability to perform its mission because of controversy and litigation over noise impacts.

The absence of state or local environmental noise regulations does not absolve an agency from being aware of adverse impacts on the surrounding community.

Unilateral implementation of an agency environmental noise compliance program may elicit a variety of public responses, including:

- Praise for the agency's interest in community welfare
- Concerns that formal documentation of noise impacts on the community will adversely affect property values, ability to obtain loans and financing within the affected community and the ability to sell affected property
- Demands that the agency provide soundproofing to source or affected facilities sufficient to reduce noise levels to those experienced in a neighborhood not subject to that noise
- Demands that the agency curtail its environmental noise-producing activities
- Demands that the agency make up the difference between appraised value of a property without regards to noise impact and the property's value realized upon sale in the open market.

Minimization of adverse public responses to an agency program is often achieved by the agency initiating a coordinated cooperative approach with the community, emphasizing mutual problem solving together with local governmental agencies and community organizations.

The degree and extent to which the surrounding community perceives the Federal agency as being responsible for an adverse environmental noise impact can usually be determined by review of an agency's community complaint logbook. Effective logbooks include not only the complaint but also the agency operations and the atmospheric conditions present at the time as well as the actions taken in response to the complaint. The agency public affairs official can be especially helpful in handling complaints and in advising the community of actions being taken to minimize environmental noise impacts.

Compliance with Federal, State and local requirements is generally interpreted to mean that Federal agencies will comply with the procedural as well as the substantive aspects of environmental noise legislation. Obtaining permits for regulated functions would be an example of procedural compliance.

Agency Policy

Insert applicable agency policy here.

AUDIT INFORMATION SOURCE LIST

ENVIRONMENTAL NOISE

Activity: Environmental Noise

Records to Review:

- Facility Master Plan Document
- Complaint log from local community.

Physical Features to Inspect:

- Power generating or other noise
- Emergency generators
- Test tracks.

People to Interview:

- Facility Engineer
- Public Affairs Officer.

ENVIRONMENTAL NOISE CHECKLIST

Facility: _____ _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
42 USC 4903	**On-site equipment or operations produce noise loud enough to be heard outside of the facility's boundary:** • If not, the facility is in compliance with noise control and abatement requirements and further auditing is not necessary. • If noise can be heard outside of the facility boundary, audit to determine compliance with agency, state, interstate and local requirements. **Off-site equipment or operations produce noise loud enough to be distinguished from background noise:** • If not, the equipment or operations are in compliance with noise control and abatement requirement and further auditing is not necessary unless there is a history of noise related complaints from the community. • If equipment of operations noise can be distinguished from local background noise at the site, audit to determine if the activity complies with agency, state, interstate and local requirements.		

NATURAL RESOURCES

CHAPTER 16

NATURAL RESOURCES

Federal Statutes

Natural resources include fish and wildlife, and water and land. Several acts mandate preservation requirements for these resources.

Requirements pertaining to fish and wildlife protection include the following:

- Executive Order 11987-Exotic Organisms -- restricts the introduction of species into areas where they do not normally occur.

- Endangered Species Act of 1973 and the Fish and Wildlife Coordination Act -- require Federal agencies to give consideration to wildlife conservation in the actions they fund, authorize or carry out.

- Marine Mammal Protection Act of 1972 -- mandates a moratorium on the killing, capturing, harming and importation of marine mammals and the importation of marine mammal products.

Preservation of water and land resources is mandated in the following requirements:

- Executive Order 11990-Protection of Wetlands, and Executive Order 11988-Floodplain Management -- address the actions Federal agencies must take to identify and protect wetlands and floodplains, minimize the risk of flood loss and destruction of wetlands, and preserve and enhance the natural and beneficial values of both floodplains and wetlands.

- Farmland Protection Policy Act of 1981 -- minimizes the extent to which Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses.

- Wild and Scenic Rivers Act of 1968 -- prohibits the use of Federal funds which would have adverse effect on those characteristics which caused a river to be classified as wild, scenic, or recreational.

- Coastal Zone Management Act of 1972 -- requires Federally funded actions to be preceded by a determination of consistency with a State's coastal zone management plan.

- Deepwater Port Act of 1974 -- provides for the protection of the marine and coastal environment from adverse impacts associated with the development of ports.

More information on these acts and their applications can be obtained from the implementing agency.

Applicability

A facility may need to consider natural resources preservation requirements if:

- Managing fish, wildlife, land or water.
- Located near a water body, especially a wild and scenic river or a coastal zone.
- Planning new construction in a floodplain or wetland.
- Planning improvement of an existing facility in a floodplain or wetland.
- Operating a deepwater port.
- Selling or leasing right-of-way of owned property.

This list is not comprehensive; there are many special cases.

Regulatory Scope

Many regulations implement the acts requiring natural resource preservation. In addition, some agency-specific regulations on environmental protection include requirements for the preservation of natural resources.

Regulations pertaining to natural resources include the following:

- Interagency Cooperation-Endangered Species Act of 1973, as amended (50 CFR Part 402) -- interprets and implements section 7(a)-(d) of the Endangered Species Act.
- Endangered and Threatened Wildlife and Plants (50 CFR Part 17) -- implements the Endangered Species Act.
- Regulations Governing Small Sites of Marine Mammals Incidental to Specified Activities (50 CFR Part 228) -- provides a mechanism for allowing the incidental, but not intentional, killing or harming of non-depleted marine mammals by U.S. citizens.
- Marine Mammals (50 CFR Part 18) -- implements the Marine Mammal Protection Act of 1972.
- Regulations Governing the Taking and Importing of Marine Mammals (50 CFR Part 216) -- implements the Marine Mammal Protection Act.
- Farmland Protection Policy Act (7 CFR Part 658) -- sets out criteria for Federal agencies to identify and take into account the adverse effects of their programs on the preservation of farmland.
- Federal Consistency with Approved Coastal Management Programs (15 CFR Part 930) -- specifies requirements for agencies in complying with the Federal consistency provision of the Coastal Zone Management Act.

- Wild and Scenic Rivers (36 CFR Part 297) -- provides rules applying to Federal assistance in the construction of water resources projects affecting wild and scenic rivers or study rivers.

- Deepwater Ports (33 CFR Part 148) -- prescribes regulations for the licensing, construction design and equipment, and operation of deepwater ports under the Deepwater Port Act of 1974.

More comprehensive lists of regulations covering the specific acts may be obtained by contacting the implementing agency or referring to the portions of the CFR for that agency.

State and Local Regulatory Authority

States and localities have many additional requirements in the natural resource protection area. Some facts to consider include the following:

- State and local agencies must adopt minimum management strategies to avoid future flood damage within their floodplain areas in order to receive National Flood Insurance.

- Federal agencies are not required to afford local endangered species the same level of protection as Federally listed species. The policy of some agencies, however, is to cooperate with the states to the maximum extent possible.

- The Fish and Wildlife Conservation Act gives implementing authority to the State.

- The Coastal Zone Management Act requires that the Federal facility be consistent with the State's Coastal Zone Management Plan.

Requirements vary too widely to provide generic guidance applicable to a specific Federal facility. Agencies should contact State and local agencies for site-specific guidance.

Selected Management Considerations

To aid in maintaining compliance with natural resources protection regulations, facilities can take the following steps:

- Maintain a file of Federal regulations pertaining to natural resources

- Maintain a file of the latest agency regulations and policies dealing with natural resources

- Designate and train a natural resources manager

- Keep a record of natural resources management activities.

These actions will increase awareness of natural resources and help the facilities to stay in compliance with all protection requirements.

Agency Policy

Insert applicable agency policies here.

AUDIT INFORMATION SOURCE LIST

NATURAL RESOURCES

Activity: Natural Resources

Records to Review:

- Permit for the taking of endangered species
- Notifications to the FWS of the taking of endangered species without a permit
- Letter of Authorization for the incidental taking of marine mammals
- Permit for the taking of marine mammals
- Form AD 1006
- Environmental Impact Statement
- State Coastal Zone Management Plan compliance statement
- License for ownership, construction or operation of a Deepwater Port.

Physical Features to Inspect:

- Facilities constructed in the past 2 years
- Wildlife containment areas
- Wildlife habitat and land and water resources
- Equipment which could damage wildlife, its habitat, or land and water resources.

People to Interview:

- Natural Resources Manager
- Environmental Coordinator/Officer
- Land Management Officer
- Grounds Maintenance Crew.

NATURAL RESOURCES CHECKLIST

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Fish and Wildlife:		
50 CFR 402.10	• Facility confers with Fish & Wildlife Service (FWS) on actions which are likely to jeopardize the continued existence of proposed endangered species or adversely affect proposed critical habitat.		
50 CFR 402.12	• A biological assessment is performed on all major construction activities. These activities are determined to be "no jeopardy" to endangered species, are exempted, or their effects are mitigated to comply with FWS requirements.		
50 CFR 228	• Any facility activity that causes the accidental harming, capturing, or killing of marine mammals, is approved by a Letter of Authorization from the National Marine Fisheries Service.		
50 CFR 17.21 (a-c)	• Facility does not import, expert, harm, capture or kill any endangered species except as required in conservation efforts or as authorized by a permit from the FWS. Reports are made to the FWS of any killing, capturing or harming of an endangered species in conservation efforts.		
50 CFR 18.22, .33	• Facility notifies the FWS of any killing, capturing or harming of a marine mammal done in order to protect the welfare of the mammal or to protect human health or welfare. Any capturing or killing of marine mammals for research purposes is authorized by a permit from the FWS.		

Activity: Natural Resources

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
50 CFR 216	• Any facility activity that involves capturing, killing or harming of cetacea (whales and porpoises) and pinnipedia other than walrus (seals and sea lions) is approved by an applicable permit from the Department of Commerce.		
EO 11987 Sec. 2(a)	• Facility does not release, establish or risk the escape of species of plants and animals not naturally occurring in the United States into the natural ecosystems of facility lands and waters unless the introduction is approved by the Secretary of Agriculture or Interior.		
EO 11987 Sec. 2(b, c)	• Facility does not import species not naturally occurring in the U.S. and does not export native species to be released in areas outside the U.S. where they do not naturally occur unless the import or export is approved by the Secretary of Agriculture or Interior.		
	Land and Water Resources:		
7 CFR 658.4	• An evaluation of prospective farmland conversion impacts, including Form AD 1006 and use of criteria found in 7 CFR Part 658.5 is performed for all construction and improvement projects which involve acquiring, managing, or disposing of federal lands unless the project is an acquisition which is exempted for national defense purposes.		
EO 11988	• Facility complies with the requirement that potential effects of actions taken in floodplains are evaluated and considered.		

Activity: Natural Resources

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
EO 11990	• Facility considers wetlands protection in decision-making.		
15 CFR 930.34, 930.44	• Facility provides the State with a statement of compliance with the State's Coastal Zone Management Program. Actions approved by the State are subjected to continued monitoring by Federal and State agencies.		
36 CFR 297	• Facility does not participate in any water resources project on any portion of a Wild and Scenic River or Study River.		
33 CFR 148	• If applicable, the facility is licensed by the Coast Guard or authorized by an exemption to own, construct, or operate a Deepwater Port.		

CULTURAL RESOURCES

CHAPTER 17

CULTURAL RESOURCES

Federal Statutes

Cultural resources include places of historic or archaeological interest. Several acts specify requirements which Federal agencies must meet in order to protect these resources.

Requirements pertaining primarily to historic preservation include the following:

- The National Historic Preservation Act of 1966 (NHPA) as amended 1980 -- establishes the National Register of Historic Places under the Department of Interior. This register is designed to assist Federal and State agencies in identifying those resources which must be considered before making irrevocable decisions. Section 106 of the Act requires Federal agencies to consider the effect of a funded, licensed, assisted or approved project on any cultural resource listed, eligible or potentially eligible for listing in the National Register and allows the Advisory Council on Historic Preservation opportunity to comment on the undertaking.

- Section 110 of the NHPA -- requires Federal agencies to carry out their programs in accordance with, and in furtherance of the NHPA; to designate historic preservation officers to coordinate the agency's activities under the Act; to identify and preserve historic properties under their ownership or control; and make efforts to minimize harm to National Historic Landmarks.

- The Historic Sites Act of 1935 -- authorizes the establishment of National Historic Sites and Landmarks and the preservation of properties of national historical or archaeological significance.

Requirements pertaining primarily to protection of archaeological resources include the following acts:

- The Archaeological Resources Protection Act of 1979 -- provides protection for archaeological resources found on public lands and Indian lands of the United States and prohibits the removal of archaeological resources on public lands and Indian lands without first obtaining a permit from the affected Federal land managing agency or Indian tribe.

- The Reservoir Salvage Act of 1960 -- provides for the recovery and preservation of historical and archaeological data, including relics and specimens that might be lost or destroyed as a result of the construction of dams, reservoirs, and attendant facilities and activities.

- The Historic and Archaeological Data Preservation Act of 1974 -- amends the Reservoir Salvage Act of 1960 to extend its provisions beyond the construction of dams to any alteration of the terrain caused as a result of any Federal construction project or federally-licensed activity or program. Provides a mechanism for funding the protection of historical and archaeological data, and

allows the use of a faster consultation process than Section 106 when an agency discovers significant archaeological resources during construction.

More information on these acts may be obtained through consultation with the Department of Interior or other appropriate Federal agencies.

Applicability

Facilities may have to consider cultural resources requirements if:

- Management is planning construction, particularly excavation.
- Management is planning non-construction activities which could affect a cultural resource.
- Facility is situated on historically or archaeologically significant land.
- Facility or part of facility is considered an historical site.
- A cultural resources survey has determined that the facility is significant to a cultural resource.

In addition, facilities for which a cultural resources survey has not been conducted as part of an environmental assessment may be subject to these requirements (See Chapter 18, Environmental Assessment.)

Regulatory Scope

A number of regulations have been promulgated to implement acts protecting cultural resources. The acts stand alone in providing a great deal of procedural guidance. In addition, Federal agencies have their own procedures that are often published in the Federal Register. Individual agencies write their own regulations, particularly for implementing the Archaeological Resources Protection Act and Section 110 of NHPA. Federal facilities must comply with their agency-specific regulations.

General regulations significant in the preservation of cultural resources include the following regulations:

- Protection of Historic and Cultural Properties (36 CFR Part 800) -- implements Section 106 of NHPA. Details the procedures for reports to the Council, the roles and responsibilities of the Federal agency, the State Historic Preservation Officer (SHPO), the ACHP and other interested parties.
- Assessing Affects (36 CFR Part 800.5) -- requires agency to consult with interested parties; heads of local government; applicants for and holders of grants, permits and licenses involved in the undertaking; and representatives of Indian tribes, when an undertaking will affect Indian lands.
- National Register of Historic Places (36 CFR Part 60) -- defines the procedural requirements for listing properties on the National Register under the National Historic Preservation Act of 1966.

A more complete list of regulations covering a particular act may be found in the portions of the CFR pertaining to the implementing agency. Land management facilities will often be subject to additional regulations promulgated by their agencies.

State and Local Regulatory Authority

The SHPO is responsible for implementation of the National Historic Preservation Act. SHPO and staff must be consulted during all cultural resources planning.

Selected Management Considerations

The presence of historic or archaeological places of interest on a Federal facility obliges agency management to preserve our nation's heritage while performing the agency mission. Fulfilling this obligation and complying with cultural resources regulations can be made easier by carrying out suggested procedures:

- Maintaining a file of Federal, State, local and agency regulations and policies regarding cultural resources protection
- Designating and training a cultural resources preservation manager
- Keeping a record of facility cultural resources preservation activities.

In addition, historic or archaeological designation may restrict management's options for use, repair, protection, modification, and maintenance of the place, structure or area. Procedures are required to be in compliance with the law. It is sometimes the case that an agency is preserving a cultural resource, but is not in compliance because consultation procedures are not followed.

Agency Policy

Insert applicable agency regulation policies here.

AUDIT INFORMATION SOURCE LIST

CULTURAL RESOURCES

Activity: Cultural Resources

Records to Review:

- For construction activities: documentation of finding of no adverse effect, or Memorandum of Agreement with the SHPO or requests for comment when there is no agreement
- Notification of any contruction projects sent to Secretary of Interior.

Physical Features to Inspect:

- Construction sites
- Site or landmark of historic or archaeological interest.

People to Interview:

- Archaeologist/Historic Preservation Officer
- Grounds Maintenance Crew
- Land Management Officer.

CULTURAL RESOURCES CHECKLIST

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Historical Resources:		
36 CFR 800	• Projects and activities that can result in changes in the character or use of historic properties are assessed for effect on historic properties. The State Historic Preservation Officer and the Advisory Council on Historic Preservation are consulted in these assessments.		
36 CFR 60.9	• Facility complies with agency's program to locate, inventory, and nominate all properties under the agency's control.		
	Archaeological Resources:		
16 USC 469	• Written notice is given to the Secretary of Interior concerning construction projects which could adversely affect archaeological resources.		
36 CFR 296.4 *	• Excavation, removal, damage, or alteration of any archaeological resource located on facility lands is authorized by a permit from the Federal Land Manager.		
36 CFR 296.5 *	• Any archaeological resource obtained in violation of Federal law is **NOT** sold, purchased, exchanged, or transported by the facility.		

* These regulations for USDA-USFS. Similar regulations exist for Interior (43 CFR 7), TVA (18 CFR 1312), and DoD (32 CFR 229).

ENVIRONMENTAL IMPACT DOCUMENTATION

CHAPTER 18

ENVIRONMENTAL IMPACT DOCUMENTATION

Federal Statutes

The mandated requirement to assess the environmental effects of major Federal actions is based in the National Environmental Policy Act of 1969 (NEPA), the basic national charter for protection of the environment. NEPA does not mandate that decision-makers must avoid all adverse environmental effects in proceeding with a Federal action, but does require that the decision to proceed with such an action must be an informed and procedurally correct decision.

NEPA establishes Federal environmental assessment policy, sets goals, and provides means for carrying out the policy. The Act, as implemented by Executive Orders 11514 and 11991 and the Council on Environmental Quality (CEQ) Regulations, requires that Federal agencies perform the following actions:

- Include in their decision-making processes appropriate and careful consideration of all environmental effects of proposed actions
- Analyze potential environmental effects of proposed actions and their alternatives for public understanding and scrutiny
- Avoid or minimize adverse effects of proposed actions
- Restore and enhance environmental quality as much as possible.

The requirement for environmental assessments is somewhat unique compared with other environmental legislation in that:

- National security cannot be used as a reason for exempting a Federal action from the provisions of NEPA.
- Each Federal agency is required to adopt procedures to supplement the CEQ regulations and to publish those procedures in the Federal Register for public comment.
- There are no provisions of law for the States to assume primacy for managing the provisions of NEPA for all Federal agencies.
- Contractors chosen by an agency to prepare an environmental impact statement (EIS) must execute a disclosure statement specifying that they have no financial or other interest in the outcome of the project.

In effect, NEPA requires that environmental concerns be given equal consideration with economic and technical considerations of decision-makers.

Executive Order 12114, Environmental Effects of Major Federal Actions Abroad, establishes internal procedures for Federal agencies to consider the significant effects of their actions on the environment outside the United States, its territories and possessions. Environment is defined for this Order as the natural and physical environment and excludes social, economic and other environments. Federal agencies are required to establish procedures for actions significantly affecting:

- The environment of the global commons outside the jurisdiction of any nation (e.g., the oceans or Antarctica)
- The environment of a foreign nation
- Natural or ecological resources of global importance designated for protection.

Specific exemptions are provided for in this Order.

Applicability

The environmental impact analysis process is applicable to proposed major Federal actions such as:

- Construction -- Examples include both new and modifications to existing buildings, roads, pipelines, airfields, transmission towers, fences, dams, and pathways into remote areas.
- Equipment development -- The environmental effects of mission equipment such as missile systems, aircraft, vehicles, incinerators, waste treatment devices, satellites, laser/microwave communication systems, and transportation systems may require assessment.
- New/changed mission programs -- Environmental assessments may be required for decisions on implementing new/changed programs such as genetic engineering, changes in public land use, biochemical defense, space stations, and opening or closing installations/facilities.

NEPA provides that the environmental assessment process is applicable when Federal funding is used by non-Federal agencies to accomplish an action which may have significant environmental effects. This condition is likely to exist in grant programs where Federal funding is used to support actions taken by States under the provisions of Federal environmental legislation.

Regulatory Scope

The basic working reference document for Federal environmental assessment programs is the "CEQ Regulations on Implementing National Environmental Policy Act Procedures", which is codified as 40 CFR Part 1500. The regulations implement section 102(2)(c) of NEPA, which contains the provision for preparing environmental documentation to ensure that Federal agencies act according to the letter and spirit of the Act.

The CEQ regulations provide for Federal agencies to adopt procedures to supplement the CEQ Regulations, to consult with the Council, and to publish the procedures in the Federal Register for public comment. These agency-specific procedures are subject to Council review. Federal agency procedures are required to include specific criteria for and identification of those typical classes of action that:

- Require EIS
- Do not require either an EIS or an environmental assessment (categorical exclusions)
- Require environmental assessments but not necessarily EISs.

Since agency-written procedures rather than the CEQ Regulations are normally available to operating personnel, consistency, completeness and currency are imperative for compliance with NEPA. Failure to include CEQ requirements in agency procedures does not relieve the agency of responsibility for compliance.

Functional examples that can result in a noncompliance condition or trigger revalidation of documented environmental effects include the following conditions:

- Mitigation -- Environmental documentation used by decision makers frequently contains actions to be taken during implementation of an action to mitigate undesirable environmental effects. When the Record of Decision (ROD) contains these mitigation actions for the selected alternative, the actions must be followed in completing the action. Failure to translate mitigation in the ROD into project actions could result in a noncompliance condition.
- Tiering -- For multiphase major actions an initial programmatic EIS is frequently used as a base on which to build later action decisions. Noncompliance can occur when supplements are not prepared before specific subsequent phase implementing decisions are made.
- Project changes -- Substantive changes to a project; i.e., substantively different from the statement of the proposed action in the environmental documentation, require documentation of the reconsideration of the environmental effects of the project. Changes which can trigger a need for reconsideration include, but are not limited to, siting of a project, installation of more or different equipment into a proposed facility, different construction techniques, different equipment serviced in facilities or airfields, introduction of hazardous or toxic wastes, and scope of the action.
- Environmental setting -- Modification of surrounding land use, discovery of a previously unknown endangered species or archaeological site, and population shifts are examples of uncontrollable factors which may require changes/additions to environmental documentation during the implementation phase of a Federal action.

Project changes do not necessarily require preparation of new environmental impact statements or even environmental assessments; however, agency management does need to determine the impact of the changes and to document management's decision on the need, or lack thereof, for additional environmental documentation.

State and Local Regulatory Authority

More than half of the States have implemented environmental assessments within their environmental programs. NEPA has multiple provisions with regards to State involvement in the Federal environmental assessment process but generally does not provide for the States assuming primacy for the Federal program. State and local regulatory authorities have the power to do the following:

- Comment on proposed Federal actions when those authorities are authorized to develop and enforce environmental standards
- Request a Federal agency to set time limits for the NEPA process
- Participate in the scoping process
- Act with a Federal agency as joint lead agencies to prepare an environmental impact statement
- Choose to use the system of clearinghouses established by Office of Management and Budget Circular A-95 (Revised) for securing the views of state and local environmental agencies regarding environmental documentation for Federal actions
- Have their EIS requirements, which are in addition to but not in conflict with Federal requirements, included in the preparation of a Federal environmental impact statement
- Become a cooperating agency for a Federal action.

NEPA does provide that states and units of general local government and Indian tribes may assume NEPA responsibilities for actions taken under section 104(h) of the Housing and Community Development Act of 1974.

Selected Management Considerations

NEPA is a "cradle to grave" operational requirement for Federal decision-makers and project personnel, i.e., the signing of a Record of Decision for an EIS does not ensure NEPA compliance. As changes in the action become necessary for previously unforeseen reasons or when the environmental setting for an action changes, decision-makers need to revalidate their decision on the action.

The penalty for failure to follow the environmental impact assessment process has been for a court to enjoin the proponent Federal agency from proceeding with the project. This injunction normally lasts until the agency has complied with NEPA, has better documented the action and environmental effects, or has improved the analysis of the environmental documentation.

Agency Policy

Insert applicable agency regulations and policies here.

AUDIT INFORMATION SOURCE LIST

ENVIRONMENTAL IMPACT DOCUMENTATION

Activity: Environmental Impact Documentation

Records to Review:

- Environmental Assessment
- Environmental Impact Statement
- Record of Decision
- Finding of No Significant Impact
- List of any facilities constructed since 1970.

Physical Features to Inspect:

- Mitigation features.

People to Interview:

- Facilities Manager
- General Services Administration
- NEPA Program Office staff.

ENVIRONMENTAL IMPACT DOCUMENTATION CHECKLIST

Facility: _____ Auditor: _____ Date: _____

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	Evaluation of Program:		
	Environmental documentation is prepared:		
40 CFR 1501.3	• According to agency procedures.		
40 CFR 1500.2, .5 1501.2	• Early in the planning and review process.		
40 CFR 1502.6	• By individuals with relevant technical backgrounds.		
40 CFR 1501.3	• When required by agency procedures and when necessary to assist planning and decisionmaking.		
40 CFR 1502.9	• When substantial changes are made to or significant new information is learned about a previously documented proposed action.		
	In preparing documentation:		
40 CFR 1500.4, .5	• Categorical exclusions are used for similar actions with no significant environmental effect.		
40 CFR 1500.4, .5 1501.4	• A finding of no significant impact (FNSI) is prepared when a nonexcluded action is determined to have no significant impact.		
40 CFR 1507.3	• Security regulations are followed for classified information.		

Activity: Environmental Impact Documentation

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 1500.4, .5 1501.4, .7	• The scoping process is used to identify issues for environmental impact statements (EIS).		
40 CFR 1500.4, .5 1506.2, .3	• Duplication of effort is avoided by joint preparation and adoption of existing documentation.		
40 CFR 1506.5	• Information from outside sources is evaluated and verified prior to inclusion in an EIS.		
40 CFR 1506.5	• Contractors, who prepare an EIS, execute a disclosure statement specifying that they have no financial or other interest in the outcome of the project.		
40 CFR 1503.4	• Public review comments are considered and included in a final EIS.		
	Evaluation of Operations:		
	Environmental documentation has been prepared on:		
40 CFR 1501.3	• Construction projects such as buildings, roads, pipelines, airfields, dams, and transmission towers.		
40 CFR 1501.3	• Equipment development for items that have potential for significant impact on the environment.		

Activity: Environmental Impact Documentation

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
40 CFR 1501.3	• New or significant changes to mission programs that have potential for significant impact on the environment.		
	Environmental documentation:		
40 CFR 1503	• Is circulated for comments of interested Federal, State and local agencies and the public.		
40 CFR 1506.6	• Is publicized through mailings and notices.		
40 CFR 1506.6	• Is made available to the public without charge or at actual cost.		
	For a proposed project:		
40 CFR 1502.2	• Alternative selection is not prejudiced by resource commitments before making the final decision.		
40 CFR 1501.4	• A finding of no significant impact (FNSI) is made available for public review.		
40 CFR 1506.1	• Actions which limit alternatives or have an adverse environmental effect are not taken until the Record of Decision (ROD) is signed.		

Activity: Environmental Impact Documentation

Regulatory Citation	Auditors' Checklist	Comments	Finding Number
	For a completed project:		
40 CFR 1505.2, .3	• Mitigation measures are conducted as described in a monitoring and enforcement program contained in the ROD.		
40 CFR 1505.3	• Mitigation monitoring results are available to the public.		

ENVIRONMENTAL MANAGEMENT SYSTEMS

CHAPTER 19

ENVIRONMENTAL MANAGEMENT SYSTEMS

Purpose

The previous chapters aid an audit team in assessing a facility's environmental management system on an issue-by-issue basis. An agency may use the opportunity of onsite visits to collect information on the overall environmental compliance management program. The questionnaire in Exhibit 19-1 can be used for identifying the strengths and weaknesses of an existing environmental compliance program or may help determine a model compliance program for an agency. It addresses management processes, procedures and responsibilities that will enhance compliance with environmental requirements addressed previously. The questionnaire is equally valuable to facility personnel assessing their own environmental compliance program. The facility manager generally completes the questionnaire.

EXHIBIT 19-1
Environmental Compliance Program Questionnaire

Facility Name: _____

Facility Manager: _____

Major Activity of Facility :

A. Current Environmental Compliance Program Description

1. Considering your mission, facilities and operations, how applicable is an Environmental Compliance Program (ECP) to your program?

1	2	3	4	5
(little)				(very)

2. What are the basic goals and objectives for your ECP?

3. How are these goals and objectives, and responsibilities for implementation conveyed to your personnel? (Check all appropriate blanks)

Policy statement(s)	_____
Environmental management committee	_____
Standard operating procedures	_____
Training	_____
Other formal guidance	_____

If any of the above documentation exists, please append copies.

4. What is the basis for your ECP?

	Please fill-in title/brief description
Policy Statements	_____
Guidance from line management	_____
Self-generated guidance	_____
Direction from regulators	_____
Other (briefly describe)	_____

5. Please attach an organizational chart detailing the reporting chain between you and the environmental compliance coordinator(s).
Does your environmental compliance coordinator (ECC) report directly to you? _____
Are you comfortable with the reporting chain between you and your ECC? _____
If not, please briefly describe the problem.

6. How often do you meet with the ECC?

7. What is the critical job element weight allotted for the area of environmental compliance?

Do you have performance standards in the area of environmental compliance for your subordinates?

B. Implementation of the ECP

1. Please rate the resources you have provided for the ECP.

Personnel (understaffed)	1	2	3	4	5 (fully staffed)
Training (minimal)	1	2	3	4	5 (fully trained)
Equipment (minimal)	1	2	3	4	5 (meets requirements)
Facilities (inadequate)	1	2	3	4	5 (meets requirements)

Please complete the following chart showing personnel allocation.

	Number of Personnel	Total Hrs/wk	Hrs/wk Required for Fully-Effective Program
Environmental Compliance Coordinator(s)	_____	_____	_____
Hazardous Waste Disposal Officer(s)	_____	_____	_____

What are the dollar resources provided for the ECP?

Is it enough?

2. Are you provided with sufficient funding for training in the area of environmental compliance?

   Please describe your needs in this area:

3. Do you have authority to delegate monetary resources and personnel to the area of environmental compliance?

4. Please describe the mechanisms you use to communicate environmental compliance initiatives from upper management to facility staff (i.e., briefings, staff meetings, informal conversation):

   . . . the mechanisms upper management uses to communicate environmental compliance initiatives to you:

5. How comfortable are you with the authority you have been delegated to allocate resources in the area of environmental compliance?

   1 2 3 4 5
   (not comfortable) (very comfortable)

6. Have you been provided with management indicators and personnel performance standards related to environmental compliance for incorporation into your own performance standards?

   If not, have you developed your own?

7. In either case, have you provided environmental compliance performance standards to subordinate personnel?

8. What type of appropriated funds are you getting to support environmental compliance activities?

9. Who do you turn to for advice for environmental compliance programs? Are you satisfied with the advice?

C. Program Evaluation

1. Are you comfortable with your facility's compliance with environmental regulations?

1	2	3	4	5
(not comfortable)				(very comfortable)

How are you informed of compliance status?

2. Are you the responsible official for initiating corrective actions? If not, who is?

Are existing resources a restraint in implementing corrective actions? (Please be specific)

3. Overall, do you think your ECP is effective?

4. What is your biggest ECP management problem?

5. Please briefly describe the greatest assets and deficiencies of your ECP?

6. Describe your perception of the appropriate role for your agencies environmental staff at the headquarters.

7. Describe your perception of the appropriate role for line personnel in the ECP.

Name of person completing this form: _____

Signature: _____ Date: _____

APPENDICES

APPENDIX A
EPA'S ENVIRONMENTAL AUDITING POLICY STATEMENT

ENVIRONMENTAL PROTECTION AGENCY

[OPPE-FRL-3046-6]

Environmental Auditing Policy Statement

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final policy statement.

SUMMARY: It is EPA policy to encourage the use of environmental auditing by regulated entities to help achieve and maintain compliance with environmental laws and regulations, as well as to help identify and correct unregulated environmental hazards. EPA first published this policy as interim guidance on November 8, 1985 (50 FR 46504). Based on comments received regarding the interim guidance, the Agency is issuing today's final policy statement with only minor changes.

This final policy statement specifically:

- Encourages regulated entities to develop, implement and upgrade environmental auditing programs;
- Discusses when the Agency may or may not request audit reports;
- Explains how EPA's inspection and enforcement activities may respond to regulated entities' efforts to assure compliance through auditing;
- Endorses environmental auditing at federal facilities;
- Encourages state and local environmental auditing initiatives; and
- Outlines elements of effective audit programs.

Environmental auditing includes a variety of compliance assessment techniques which go beyond those legally required and are used to identify actual and potential environmental problems. Effective environmental auditing can lead to higher levels of overall compliance and reduced risk to human health and the environment. EPA endorses the practice of environmental auditing and supports its accelerated use by regulated entities to help meet the goals of federal, state and local environmental requirements. However, the existence of an auditing program does not create any defense to, or otherwise limit, the responsibility of any regulated entity to comply with applicable regulatory requirements.

States are encouraged to adopt these or similar and equally effective policies in order to advance the use of environmental auditing on a consistent, nationwide basis.

DATES: This final policy statement is effective July 9, 1986.

FOR FURTHER INFORMATION CONTACT:

Leonard Fleckenstein, Office of Policy, Planning and Evaluation, (202) 382-2726;

or

Cheryl Wasserman, Office of Enforcement and Compliance Monitoring, (202) 382-7550.

SUPPLEMENTARY INFORMATION:

ENVIRONMENTAL AUDITING POLICY STATEMENT

I. Preamble

On November 8, 1985 EPA published an Environmental Auditing Policy Statement, effective as interim guidance, and solicited written comments until January 7, 1986.

Thirteen commenters submitted written comments. Eight were from private industry. Two commenters represented industry trade associations. One federal agency, one consulting firm and one law firm also submitted comments.

Twelve commenters addressed EPA requests for audit reports. Three comments per subject were received regarding inspections, enforcement response and elements of effective environmental auditing. One commenter addressed audit provisions as remedies in enforcement actions, one addressed environmental auditing at federal facilities, and one addressed the relationship of the policy statement to state or local regulatory agencies. Comments generally supported both the concept of a policy statement and the interim guidance, but raised specific concerns with respect to particular language and policy issues in sections of the guidance.

General Comments

Three commenters found the interim guidance to be constructive, balanced and effective at encouraging more and better environmental auditing.

Another commenter, while considering the policy on the whole to be constructive, felt that new and identifiable auditing "incentives" should be offered by EPA. Based on earlier comments received from industry, EPA believes most companies would not support or participate in an "incentives-based" environmental auditing program with EPA. Moreover, general promises to forgo inspections or reduce enforcement responses in exchange for companies' adoption of environmental auditing programs—the "incentives" most frequently mentioned in this context—are fraught with legal and policy obstacles.

Several commenters expressed concern that states or localities might use the interim guidance to *require* auditing. The Agency disagrees that the policy statement opens the way for states and localities to require auditing. No EPA policy can grant states or localities any more (or less) authority than they already possess. EPA believes that the interim guidance effectively encourages *voluntary* auditing. In fact, Section II.B. of the policy states: "because audit quality depends to a large degree on genuine management commitment to the program and its objectives, auditing should remain a voluntary program."

Another commenter suggested that EPA should not expect an audit to identify all potential problem areas or conclude that a problem identified in an audit reflects normal operations and procedures. EPA agrees that an audit report should clearly reflect these realities and should be written to point out the audit's limitations. However, since EPA will not routinely request audit reports, the Agency does not believe these concerns raise issues which need to be addressed in the policy statement.

A second concern expressed by the same commenter was that EPA should acknowledge that environmental audits are only part of a successful environmental management program and thus should not be expected to cover every environmental issue or solve all problems. EPA agrees and accordingly has amended the statement of purpose which appears at the end of this preamble.

Yet another commenter thought EPA should focus on environmental performance results (compliance or non-compliance), not on the processes or vehicles used to achieve those results. In general, EPA agrees with this statement and will continue to focus on environmental results. However, EPA also believes that such results can be improved through Agency efforts to identify and encourage effective environmental management practices, and will continue to encourage such practices in non-regulatory ways.

A final general comment recommended that EPA should sponsor seminars for small businesses on how to start auditing programs. EPA agrees that such seminars would be useful. However, since audit seminars already are available from several private sector organizations, EPA does not believe it should intervene in that market, with the possible exception of seminars for government agencies, especially federal agencies, for which EPA has a broad mandate under Executive Order 12088 to

provide technical assistance for environmental compliance.

Requests for Reports

EPA received 12 comments regarding Agency requests for environmental audit reports, far more than on any other topic in the policy statement. One commenter felt that EPA struck an appropriate balance between respecting the need for self-evaluation with some measure of privacy, and allowing the Agency enough flexibility of inquiry to accomplish future statutory missions. However, most commenters expressed concern that the interim guidance did not go far enough to assuage corporate fears that EPA will use audit reports for environmental compliance "witch hunts." Several commenters suggested additional specific assurances regarding the circumstances under which EPA will request such reports.

One commenter recommended that EPA request audit reports only "when the Agency can show the information it needs to perform its statutory mission cannot be obtained from the monitoring, compliance or other data that is otherwise reportable and/or accessible to EPA, or where the Government deems an audit report material to a criminal investigation." EPA accepts this recommendation in part. The Agency believes it would not be in the best interest of human health and the environment to commit to making a "showing" of a compelling information need before ever requesting an audit report. While EPA may normally be willing to do so, the Agency cannot rule out in advance all circumstances in which such a showing may not be possible. However, it would be helpful to further clarify that a request for an audit report or a portion of a report normally will be made when needed information is not available by alternative means. Therefore, EPA has revised Section III.A., paragraph two and added the phrase: "and usually made where the information needed cannot be obtained from monitoring, reporting or other data otherwise available to the Agency."

Another commenter suggested that (except in the case of criminal investigations) EPA should limit requests for audit documents to specific questions. By including the phrase "or relevant portions of a report" in Section III.A., EPA meant to emphasize it would not request an entire audit document when only a relevant portion would suffice. Likewise, EPA fully intends not to request even a portion of a report if needed information or data can be otherwise obtained. To further clarify this point EPA has added the phrase, "most likely focused on particular information needs rather than the entire report," to the second sentence of paragraph two, Section III.A. Incorporating the two comments above, the first two sentences in paragraph two of final Section III.A. now read: "EPA's authority to request an audit report, or relevant portions thereof, will be exercised on a case-by-case basis where the Agency determines it is needed to accomplish a statutory mission or the Government deems it to be material to a criminal investigation. EPA expects such requests to be limited, most likely focused on particular information needs rather than the entire report, and usually made where the information needed cannot be obtained from monitoring, reporting or other data otherwise available to the Agency."

Other commenters recommended that EPA not request audit reports under any circumstances, that requests be "restricted to only those legally required," that requests be limited to criminal investigations, or that requests be made only when EPA has reason to believe "that the audit programs or reports are being used to conceal evidence of environmental non-compliance or otherwise being used in bad faith." EPA appreciates concerns underlying all of these comments and has considered each carefully. However, the Agency believes that these recommendations do not strike the appropriate balance between retaining the flexibility to accomplish EPA's statutory missions in future, unforeseen circumstances, and acknowledging regulated entities' need to self-evaluate environmental performance with some measure of privacy. Indeed, based on prime informal comments, the small number of formal comments received, and the even smaller number of adverse comments, EPA believes the final policy statement should remain largely unchanged from the interim version.

Elements of Effective Environmental Auditing

Three commenters expressed concerns regarding the seven general elements EPA outlined in the Appendix to the interim guidance.

One commenter noted that were EPA to further expand or more fully detail such elements, programs not specifically fulfilling each element would then be judged inadequate. EPA agrees that presenting highly specific and prescriptive auditing elements could be counter-productive by not taking into account numerous factors which vary extensively from one organization to another, but which may still result in effective auditing programs. Accordingly, EPA does not plan to expand or more fully detail these auditing elements.

Another commenter asserted that states and localities should be cautioned not to consider EPA's auditing elements as mandatory steps. The Agency is fully aware of this concern and in the interim guidance noted its strong opinion that "regulatory agencies should not attempt to prescribe the precise form and structure of regulated entities environmental management or auditing programs." While EPA cannot require state or local regulators to adopt this or similar policies, the Agency does strongly encourage them to do so, both in the interim and final policies.

A final commenter thought the Appendix too specifically prescribed what should and what should not be included in an auditing program. Other commenters, on the other hand, viewed the elements described as very general in nature. EPA agrees with these other commenters. The elements are in no way binding. Moreover, EPA believes that most mature, effective environmental auditing programs do incorporate each of these general elements in some form, and considers them useful yardsticks for those considering adopting or upgrading audit programs. For these reasons EPA has not revised the Appendix in today's final policy statement.

Other Comments

Other significant comments addressed EPA inspection priorities for, and enforcement responses to, organizations with environmental auditing programs.

One commenter, stressing that audit programs are *internal* management tools, took exception to the phrase in the second paragraph of section III.B.1. of the interim guidance which states that environmental audits can 'complement' regulatory oversight. By using the word 'complement' in this context, EPA does not intend to imply that audit reports must be obtained by the Agency in order to supplement regulatory inspections. 'Complement' is used in a broad sense of being in addition to inspections and providing something (i.e., self-assessment) which otherwise would be lacking. To clarify this point EPA has added the phrase "by providing self-assessment to assure compliance" after "environmental audits may complement inspections" in this paragraph.

The same commenter also expressed concern that, as EPA sets inspection priorities, a company having an audit program could appear to be a 'poor performer' due to complete and accurate reporting when measured against a

company which reports something less than required by law. EPA agrees that it is important to communicate this fact to Agency and state personnel, and will do so. However, the Agency does not believe a change in the policy statement is necessary.

A further comment suggested EPA should commit to take auditing programs into account when assessing all enforcement actions. However, in order to maintain enforcement flexibility under varied circumstances, the Agency cannot promise reduced enforcement responses to violations at all audited facilities when other factors may be overriding. Therefore the policy statement continues to state that EPA may exercise its decretion to consider auditing programs as evidence of honest and genuine efforts to assure compliance, which would then be taken into account in fashioning enforcement responses to violations.

A final commenter suggested the phrase "expeditiously correct environmental problems" not be used in the enforcement context since it implied EPA would use an entity's record of correcting nonregulated matters when evaluating regulatory violations. EPA did not intend for such an inference to be made. EPA intended the term "environmental problems" to refer to the underlying circumstances which eventually lead up to the violations. To clarify this point, EPA is revising the first two sentences of the paragraph to which this comment refers by changing "environmental problems" to "violations and underlying environmental problems" in the first sentence and to "underlying environmental problems" in the second sentence.

In a separate development EPA is preparing an update of its January 1984 *Federal Facilities Compliance Strategy*, which is referenced in section III. C. of the auditing policy. The Strategy should be completed and available on request from EPA's Office of Federal Activities later this year.

EPA thanks all commenters for responding to the November 8, 1985 publication. Today's notice is being issued to inform regulated entities and the public of EPA's final policy toward environmental auditing. This policy was developed to help (a) encourage regulated entities to institutionalize effective audit practices as one means of improving compliance and sound environmental management, and (b) guide internal EPA actions directly related to regulated entities' environmental auditing programs.

EPA will evaluate implementation of this final policy to ensure it meets the above goals and continues to encourage better environmental management, while strengthening the Agency's own efforts to monitor and enforce compliance with environmental requirements.

II. General EPA Policy on Environmental Auditing

A. Introduction

Environmental auditing is a systematic, documented, periodic and objective review by regulated entities [1] of facility operations and practices related to meeting environmental requirements. Audits can be designed to accomplish any or all of the following: verify compliance with environmental requirements; evaluate the effectiveness of environmental management systems already in place; or assess risks from regulated and unregulated materials and practices.

Auditing serves as a quality assurance check to help improve the effectiveness of basic environmental management by verifying that management practices are in place, functioning and adequate. Environmental audits evaluate, and are not a substitute for, direct compliance activities such as obtaining permits, installing controls, monitoring compliance, reporting violations, and keeping records. Environmental auditing may verify but does not include activities required by law, regulation or permit (e.g., continuous emissions monitoring, composite correction plans at wastewater treatment plants, etc.). Audits do not in any way replace regulatory agency inspections. However, environmental audits can improve compliance by complementing conventional federal, state and local oversight.

The appendix to this policy statement outlines some basic elements of environmental auditing (e.g., auditor independence and top management support) for use by those considering implementation of effective auditing programs to help achieve and maintain compliance. Additional information on environmental auditing practices can be found in various published materials.[2]

Environmental auditing has developed for sound business reasons, particularly as a means of helping regulated entities manage pollution control affirmatively over time instead of reacting to crises. Auditing can result in improved facility environmental performance, help communicate effective solutions to common environmental problems, focus facility managers' attention on current and upcoming regulatory requirements, and generate protocols and checklists which help facilities better manage themselves. Auditing also can result in better-integrated management of environmental hazards, since auditors frequently identify environmental liabilities which go beyond regulatory compliance. Companies, public entities and federal facilities have employed a variety of environmental auditing practices in recent years. Several hundred major firms in diverse industries now have environmental auditing programs, although they often are known by other names such as assessment, survey, surveillance, review or appraisal.

While auditing has demonstrated its usefulness to those with audit programs, many others still do not audit. Clarification of EPA's position regarding auditing may help encourage regulated entities to establish audit programs or upgrade systems already in place.

B. EPA Encourages the Use of Environmental Auditing

EPA encourages regulated entities to adopt sound environmental management practices to improve environmental performance. In particular, EPA encourages regulated entities subject to environmental regulations to institute environmental auditing programs to help ensure the adequacy of internal systems to achieve, maintain and monitor compliance. Implementation of environmental auditing programs can result in better identification, resolution and avoidance of environmental problems, as well as improvements to management practices. Audits can be conducted effectively by independent internal or third party auditors. Larger organizations generally have greater resources to devote to an internal audit team, while smaller entities might be more likely to use outside auditors.

Regulated entities are responsible for taking all necessary steps to ensure compliance with environmental requirements, whether or not they adopt audit programs. Although environmental laws do not require a regulated facility to have an auditing program, ultimate responsibility for the environmental

[1] "Regulated entities" include private firms and public agencies with facilities subject to environmental regulation. Public agencies can include federal, state or local agencies as well as special-purpose organizations such as regional sewage commissions.

[2] See, e.g., "Current Practices in Environmental Auditing," EPA Report No. EPA-230-09-83-008, February 1984; "Annotated Bibliography on Environmental Auditing," Fifth Edition, September 1985, both available from: Regulatory Reform Staff, PM-223, EPA, 401 M Street SW, Washington, DC 20460.

performance of the facility lies with top management, which therefore has a strong incentive to use reasonable means, such as environmental auditing, to secure reliable information of facility compliance status.

EPA does not intend to dictate or interfere with the environmental management practices of private or public organizations. Nor does EPA intend to mandate auditing (though in certain instances EPA may seek to include provisions for environmental auditing as part of settlement agreements, as noted below). Because environmental auditing systems have been widely adopted on a voluntary basis in the past, and because audit quality depends to a large degree upon genuine management commitment to the program and its objectives, auditing should remain a voluntary activity.

III. EPA Policy on Specific Environmental Auditing Issues

A. Agency Requests for Audit Reports

EPA has broad statutory authority to request relevant information on the environmental compliance status of regulated entities. However, EPA believes routine Agency requests for audit reports [3] could inhibit auditing in the long run, decreasing both the quantity and quality of audits conducted. Therefore, as a matter of policy, EPA will *not* routinely request environmental audit reports.

EPA's authority to request an audit report, or relevant portions thereof, will be exercised on a case-by-case basis where the Agency determines it is needed to accomplish a statutory mission, or where the Government deems it to be material to a criminal investigation. EPA expects such requests to be limited, most likely focused on particular information needs rather than the entire report, and usually made where the information needed cannot be obtained from monitoring, reporting or other data otherwise available to the Agency. Examples would likely include situations where: audits are conducted under consent decrees or other settlement agreements; a company has placed its management practices at issue by raising them as a defense; or state of mind or intent are a relevant element of inquiry, such as during a criminal investigation. This list is illustrative rather than exhaustive, since there doubtless will be other situations, not subject to prediction, in which audit reports rather than information may be required.

EPA acknowledges regulated entities need to self-evaluate environmental performance with some measure of privacy and encourages such activity. However, audit reports may not shield monitoring, compliance, or other information that would otherwise be reportable and/or accessible to EPA, even if there is no explicit 'requirement' to generate that data.[4] Thus, this policy does not alter regulated entities' existing or future obligations to monitor, record or report information required under environmental statutes, regulations or permits, or to allow EPA access to that information. Nor does this policy alter EPA's authority to request and receive any relevant information—including that contained in audit reports—under various environmental statutes (e.g., Clean Water Act section 308, Clean Air Act sections 114 and 208) or in other administrative or judicial proceedings.

Regulated entities also should be aware that certain audit findings may by law have to be reported to government agencies. However, in addition to any such requirements, EPA encourages regulated entities to notify appropriate State or Federal officials of findings which suggest significant environmental or public health risks, even when not specifically required to do so.

B. EPA Response to Environmental Auditing

1. General Policy

EPA will not promise to forgo inspections, reduce enforcement responses, or offer other such incentives in exchange for implementation of environmental auditing or other sound environmental management practices. Indeed, a credible enforcement program provides a strong incentive for regulated entities to audit.

Regulatory agencies have an obligation to assess source compliance status independently and cannot eliminate inspections for particular firms or classes of firms. Although environmental audits may complement inspections by providing self-assessment to assure compliance, they are in no way a substitute for regulatory oversight. Moreover, certain statutes (e.g. RCRA) and Agency policies establish minimum facility inspection frequencies to which EPA will adhere.

However, EPA will continue to address environmental problems on a priority basis and will consequently inspect facilities with poor environmental records and practices more frequently. Since effective environmental auditing helps management identify and promptly correct actual or potential problems, audited facilities' environmental performance should improve. Thus, while EPA inspections of self-audited facilities will continue, to the extent that compliance performance is considered in setting inspection priorities, facilities with a good compliance history may be subject to fewer inspections.

In fashioning enforcement responses to violations, EPA policy is to take into account, on a case-by-case basis, the honest and genuine efforts of regulated entities to avoid and promptly correct violations and underlying environmental problems. When regulated entities take reasonable precautions to avoid noncompliance, expeditiously correct underlying environmental problems discovered through audits or other means, and implement measures to prevent their recurrence, EPA may exercise its discretion to consider such actions as honest and genuine efforts to assure compliance. Such consideration applies particularly when a regulated entity promptly reports violations or compliance data which otherwise were not required to be recorded or reported to EPA.

2. Audit Provisions as Remedies in Enforcement Actions

EPA may propose environmental auditing provisions in consent decrees and in other settlement negotiations where auditing could provide a remedy for identified problems and reduce the likelihood of similar problems recurring in the future.[5] Environmental auditing provisions are most likely to be proposed in settlement negotiations where:

- A pattern of violations can be attributed, at least in part, to the absence or poor functioning of an environmental management system; or
- The type or nature of violations indicates a likelihood that similar noncompliance problems may exist or occur elsewhere in the facility or at other facilities operated by the regulated entity.

[3] An "environmental audit report" is a written report which candidly and thoroughly presents findings from a review, conducted as part of an environmental audit as described in section II.A., of facility environmental performance and practices. An audit report is not a substitute for compliance monitoring reports or other reports or records which may be required by EPA or other regulatory agencies.

[4] See, for example, "Duties to Report or Disclose Information on the Environmental Aspects of Business Activities," Environmental Law Institute report to EPA, final report, September 1985.

[5] EPA is developing guidance for use by Agency negotiators in structuring appropriate environmental audit provisions for consent decrees and other settlement negotiations.

Through this consent decree approach and other means, EPA may consider how to encourage effective auditing by publicly owned sewage treatment works (POTWs). POTWs often have compliance problems related to operation and maintenance procedures which can be addressed effectively through the use of environmental auditing. Under its National Municipal Policy EPA already is requiring many POTWs to develop composite correction plans to identify and correct compliance problems.

C. Environmental Auditing at Federal Facilities

EPA encourages all federal agencies subject to environmental laws and regulations to institute environmental auditing systems to help ensure the adequacy of internal systems to achieve, maintain and monitor compliance. Environmental auditing at federal facilities can be an effective supplement to EPA and state inspections. Such federal facility environmental audit programs should be structured to promptly identify environmental problems and expenditiously develop schedules for remedial action.

To the extent feasible, EPA will provide technical assistance to help federal agencies design and initiate audit programs. Where appropriate, EPA will enter into agreements with other agencies to clarify the respective roles, responsibilities and commitments of each agency in conducting and responding to federal facility environmental audits.

With respect to inspections of self-audited facilities (see section III.B.1 above) and requests for audit reports (see section III.A above), EPA generally will respond to environmental audits by federal facilities in the same manner as it does for other regulated entities, in keeping with the spirit and intent of Executive Order 12088 and the EPA *Federal Facilities Compliance Strategy* (January 1984, update forthcoming in late 1986). Federal agencies should, however, be aware that the Freedom of Information Act will govern any disclosure of audit reports or audit-generated information requested from federal agencies by the public.

When federal agencies discover significant violations through an environmental audit, EPA encourages them to submit the related audit findings and remedial action plans expeditiously to the applicable EPA regional office (and responsible state agencies, where appropriate) even when not specifically required to do so. EPA will review the audit findings and action plans and either provide written approval or negotiate a Federal Facilities Compliance Agreement. EPA will utilize the escalation procedures provided in Executive Order 12088 and the EPA *Federal Facilities Compliance Strategy* only when agreement between agencies cannot be reached. In any event, federal agencies are expected to report pollution abatement projects involving costs (necessary to correct problems discovered through the audit) to EPA in accordance with OMB Circular A-106. Upon request, and in appropriate circumstances, EPA will assist affected federal agencies through coordination of any public release of audit findings with approved action plans once agreement has been reached.

IV. Relationship to State or Local Regulatory Agencies

State and local regulatory agencies have independent jurisdiction over regulated entities. EPA encourages them to adopt these or similar policies, in order to advance the use of effective environmental auditing in a consistent manner.

EPA recognizes that some states have already undertaken environmental auditing initiatives which differ somewhat from this policy. Other states also may want to develop auditing policies which accommodate their particular needs or circumstances. Nothing in this policy statement is intended to preempt or preclude states from developing other approaches to environmental auditing. EPA encourages state and local authorities to consider the basic principles which guided the Agency in developing this policy:

- Regulated entities must continue to report or record compliance information required under existing statutes or regulations, regardless of whether such information is generated by an environmental audit or contained in an audit report. Required information cannot be withheld merely because it is generated by an audit rather than by some other means.
- Regulatory agencies cannot make promises to forgo or limit enforcement action against a particular facility or class of facilities in exchange for the use of environmental auditing systems. However, such agencies may use their discretion to adjust enforcement actions on a case-by-case basis in response to honest and genuine efforts by regulated entities to assure environmental compliance.
- When setting inspection priorities regulatory agencies should focus to the extent possible on compliance performance and environmental results.
- Regulatory agencies must continue to meet minimum program requirements (e.g., minimum inspection requirements, etc.).
- Regulatory agencies should not attempt to prescribe the precise form and structure of regulated entities' environmental management or auditing programs.

An effective state/federal partnership is needed to accomplish the mutual goal of achieving and maintaining high levels of compliance with environmental laws and regulations. The greater the consistency between state or local policies and this federal response to environmental auditing, the greater the degree to which sound auditing practices might be adopted and compliance levels improve.

Dated: June 28, 1986.

Lee M. Thomas,

Administrator.

Appendix—Elements of Effective Environmental Auditing Programs

Introduction: Environmental auditing is a systematic, documented, periodic and objective review by a regulated entity of facility operations and practices related to meeting environmental requirements.

Private sector environmental audits of facilities have been conducted for several years and have taken a variety of forms, in part to accommodate unique organizational structures and circumstances. Nevertheless, effective environmental audits appear to have certain discernible elements in common with other kinds of audits. Standards for internal audits have been documented extensively. The elements outlined below draw heavily on two of these documents: "Compendium of Audit Standards" (©1983, Walter Willborn, American Society for Quality Control) and "Standards for the Professional Practice of Internal Auditing" (©1981, The Institute of Internal Auditors, Inc.). They also reflect Agency analyses conducted over the last several years.

Performance-oriented auditing elements are outlined here to help accomplish several objectives. A general description of features of effective, mature audit programs can help those starting audit programs, especially federal agencies and smaller businesses. These elements also indicate the attributes of auditing EPA generally considers important to ensure program effectiveness. Regulatory agencies may use these elements in negotiating environmental auditing provisions for consent decrees. Finally, these elements can help guide states and localities considering auditing initiatives.

An effective environmental auditing system will likely include the following general elements:

I. *Explicit top management support for environmental auditing and commitment to follow-up on audit findings.* Management support may be demonstrated by a written policy articulating upper management support for the auditing program, and for compliance with all pertinent requirements, including corporate policies and permit requirements as well as federal, state and local statutes and regulations.

Management support for the auditing program also should be demonstrated by an explicit written commitment to follow-up on audit findings to correct identified problems and prevent their recurrence.

II. *An environmental auditing function independent of audited activities.* The status or organizational locus of environmental auditors should be sufficient to ensure objective and unobstructed inquiry, observation and testing. Auditor objectivity should not be impaired by personal relationships, financial or other conflicts of interest, interference with free inquiry or judgment, or fear of potential retribution.

III. *Adequate team staffing and auditor training.* Environmental auditors should possess or have ready access to the knowledge, skills, and disciplines needed to accomplish audit objectives. Each individual auditor should comply with the company's professional standards of conduct. Auditors, whether full-time or part-time, should maintain their technical and analytical competence through continuing education and training.

IV. *Explicit audit program objectives, scope, resources and frequency.* At a minimum, audit objectives should include assessing compliance with applicable environmental laws and evaluating the adequacy of internal compliance policies, procedures and personnel training programs to ensure continued compliance.

Audits should be based on a process which provides auditors: all corporate policies, permits, and federal, state, and local regulations pertinent to the facility; and checklists or protocols addressing specific features that should be evaluated by auditors.

Explicit written audit procedures generally should be used for planning audits, establishing audit scope, examining and evaluating audit findings, communicating audit results, and following-up.

V. *A process which collects, analyzes, interprets and documents information sufficient to achieve audit objectives.* Information should be collected before and during an onsite visit regarding environmental compliance(*1*), environmental management effectiveness(*2*), and other matters (*3*) related to audit objectives and scope. This information should be sufficient, reliable, relevant and useful to provide a sound basis for audit findings and recommendations.

a. *Sufficient* information is factual, adequate and convincing so that a prudent, informed person would be likely to reach the same conclusions as the auditor.

b. *Reliable* information is the best attainable through use of appropriate audit techniques.

c. *Relevant* information supports audit findings and recommendations and is consistent with the objectives for the audit.

d. *Useful* information helps the organization meet its goals.

The audit process should include a periodic review of the reliability and integrity of this information and the means used to identify, measure, classify and report it. Audit procedures, including the testing and sampling techniques employed, should be selected in advance, to the extent practical, and expanded or altered if circumstances warrant. The process of collecting, analyzing, interpreting, and documenting information should provide reasonable assurance that audit objectivity is maintained and audit goals are met.

VI. *A process which includes specific procedures to promptly prepare candid, clear and appropriate written reports on audit findings, corrective actions, and schedules for implementation.* Procedures should be in place to ensure that such information is communicated to managers, including facility and corporate management, who can evaluate the information and ensure correction of identified problems. Procedures also should be in place for determining what internal findings are reportable to state or federal agencies.

VII. *A process which includes quality assurance procedures to assure the accuracy and thoroughness of environmental audits.* Quality assurance may be accomplished through supervision, independent internal reviews, external reviews, or a combination of these approaches.

Footnotes to Appendix

(*1*) A comprehensive assessment of compliance with federal environmental regulations requires an analysis of facility performance against numerous environmental statutes and implementing regulations. These statutes include:

Resource Conservation and Recovery Act
Federal Water Pollution Control Act
Clean Air Act
Hazardous Materials Transportation Act
Toxic Substances Control Act
Comprehensive Environmental Response, Compensation and Liability Act
Safe Drinking Water Act
Federal Insecticide, Fungicide and Rodenticide Act
Marine Protection, Research and Sanctuaries Act
Uranium Mill Tailings Radiation Control Act

In addition, state and local government are likely to have their own environmental laws. Many states have been delegated authority to administer federal programs. Many local governments' building, fire, safety and health codes also have environmental requirements relevant to an audit evaluation.

(*2*) An environmental audit could go well beyond the type of compliance assessment normally conducted during regulatory inspections, for example, by evaluating policies and practices, regardless of whether they are part of the environmental system or the operating and maintenance procedures. Specifically, audits can evaluate the extent to which systems or procedures:

1. Develop organizational environmental policies which: a. implement regulatory requirements; b. provide management guidance for environmental hazards not specifically addressed in regulations;

2. Train and motivate facility personnel to work in an environmentally-acceptable manner and to understand and comply with government regulations and the entity's environmental policy;

3. Communicate relevant environmental developments expeditiously to facility and other personnel;

4. Communicate effectively with government and the public regarding serious environmental incidents;

5. Require third parties working for, with or on behalf of the organization to follow its environmental procedures;

6. Make proficient personnel available at all times to carry out environmental (especially emergency) procedures;

7. Incorporate environmental protection into written operating procedures;

8. Apply best management practices and operating procedures, including "good housekeeping" techniques;

9. Institute preventive and corrective maintenance systems to minimize actual and potential environmental harm;

10. Utilize best available process and control technologies;

11. Use most-effective sampling and monitoring techniques, test methods, recordkeeping systems or reporting protocols (beyond *minimum legal requirements*);

12. Evaluate causes behind any serious environmental incidents and establish procedures to avoid recurrence;

13. Exploit source reduction, recycle and reuse potential wherever practical; and

14. Substitute materials or processes to allow use of the least-hazardous substances feasible.

(J) Auditors could also assess environmental risks and uncertainties.

[FR Doc. 86-15423 Filed 7-8-86 8:45 am]
BILLING CODE 6560-50-M

APPENDIX B
LIST OF STATE AGENCIES AND ADDRESSES

ALABAMA

Waste
Department of Environmental Management
Land Division--Solid/Hazardous Waste
1751 Federal Drive
Montgomery, AL 36130
205/271-7761/271-7735

Water
Department of Environmental Management
Water Division--Water Quality Planning
1751 Federal Drive
Montgomery, AL 36130
205/271-7825

Air
Department of Environmental Management
Air Division
1751 Federal Drive
Montgomery, AL 36130
205/271-7861

Noise
Air Pollution Control Board
645 South McDonough Street
Montgomery, AL 36130
205/834-6570

ALASKA

Waste
Department of Environmental Conservation
Environmental Quality Management Section
Solid Waste Management Section
Pouch O
Juneau, Alaska 99811
907/465-2667

Water
Department of Environmental Conservation
Division of Environmental Quality Management
Pouch O
Juneau, Alaska 99811
907/465-2640

Air
Department of Environmental Conservation
Pouch O
Juneau, Alaska 99811
907/465-2666

ARIZONA

Waste
Department of Health Services
Office of Waste and Water Quality Management
2005 North Central Avenue
Phoenix, AZ 85004
602/257-2235

Water
Department of Health Services
Office of Waste and Water Quality Management
2005 N. Central Avenue
Phoenix, AZ 85004
602/257-2305

Air
Department of Health Services
Office of Air Quality Control
2005 N. Central Avenue
Phoenix, AZ 85004
602/257-2308

Noise
Department of Health Sciences
1740 West Adams Street
Phoenix, AZ 85007

ARKANSAS

Waste
Department of Pollution Control and Ecology
Solid Waste Division
P.O. Box 9583
Little Rock, AR 72219
916/562-7444

Water
Department of Pollution Control and Ecology
Water Division, 208 Planning Section
8001 National Drive
Little Rock, AR 72209
501/562-7444

Air
Department of Pollution Control and Ecology
Air Division
8001 National Drive
Little Rock, AR 72219
501/562-7444

Noise
Motor Vehicle Division
Department of Finance and Administration
7th and Wolf Streets
Little Rock, AR 72201

CALIFORNIA

Waste
Solid Waste Management Board
1020 9th Street, Suite 300
Sacramento, CA 95814
916/322-3330

Water
Water Resources Control Board
P.O. Box 100
901 P Street
Sacramento, CA 95801

Air
Air Resources Board
P.O. Box 2815
1102 Q Street
Sacramento, CA 95812
916/322-2990

Noise
Highway Patrol
P.O. Box 898
2555 First Avenue
Sacramento, CA 95818

COLORADO

Waste
Department of Health
Hazardous Materials and Waste Management Division
4210 East 11th Avenue
Denver, CO 80220
303/331-4830

Water
Department of Health
Water Quality Control Division
4210 East 11th Avenue
Denver, CO 80220
303/320-8333
Air
Department of Health
Air Pollution Control Division/Commission
4210 East 11th Avenue
Denver, CO 80220
303/331-8500

Noise
Department of Health
4210 East 11th Avenue
Denver, CO 80220

CONNECTICUT

Waste
Department of Environmental Protection
Division of Environmental Quality
Solid Waste Management Unit
State Office Building
165 Capitol Avenue
Hartford, CT 06106
203/566-4869

Water
Department of Environmental Protection
Water Compliance and Hazardous Substances
122 Washington Street
Hartford, CT 06106
203/566-3245

Air
Department of Environmental Protection
Air Compliance Unit
State Office Building
165 Capitol Avenue
Hartford, CT 06106
203/566-4030

Noise
Department of Motor Vehicles
60 State Street
Wethersfield, CT 06109

DELAWARE

Waste
Department of Natural Resources and Environmental Control
Division of Environmental Control
Solid Waste/Hazardous Waste Section
Edward Tatnall Building, P.O. Box 1401
Dover, DE 19903
302/736-4781

Water
Department of Natural Resources and Environment Control
Division of Water Resources
89 Kings Highway
P.O. Box 1401
Dover, DE 19903
302/736-4761

Air
Department of Natural Resources and Environmental Control
Air Resources Section
P.O. Box 1401
89 Kings Highway
Dover, DE 19903
302/736-4791

DISTRICT OF COLUMBIA

Waste
Public Space Maintenance Administration
Bureau of Sanitation Services
Solid Waste Disposal Division
4701 Shepherd PKWY., SW
Washington, D.C. 20032
202/767-8512

Water
Department of Consumer and Regulatory Affairs
Environmental Control Division
5010 Overlook Avenue, SW
Washington, D.C. 20032
202/767-7370

Air
Department of Consumer and Regulatory Affairs
Environmental Control Division
5010 Overlook Avenue, SW
Washington, D.C. 20032
202/767-7370

FLORIDA

Waste
Department of Environmental Regulation
Division of Environmental Programs
2600 Blairstone Road
Tallahassee, FL 32301
904/487-1855

Water
Department of Environmental Regulation
Division of Environmental Programs
Water Quality Planning Section
2600 Blair Stone Road, Suite 531
Twin Towers Office Bldg.
Tallahassee, FL 32301
904/488-0780

Air

Department of Environmental Regulation
Air Quality Management Bureau
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904/488-1344

GEORGIA

Waste
Department of Natural Resources
Environmental Protection Division
Land Protection Branch
270 Washington Street, SW
Atlanta, GA 30334
404/656-2833

Water
Department of Natural Resources
Environmental Protection Division, Water Protection Branch
270 Washington Street, SW, Room 702
Atlanta, GA 30334
404/656-4887

Air
Department of Natural Resources
Environmental Protection Division, Air Protection Branch
270 Washington Street, SW, Room 816
Atlanta, GA 30334
404/656-6900

HAWAII

Waste
Department of Health
Pollution Investigation and Enforcement Division
P.O. Box 3378
Honolulu, HI 96801
808/548-6355

Water
Department of Health
Pollution Investigation and Enforcement Division
P.O. Box 3378
Honolulu, HI 96801
808/548-6505

Air
Department of Health
Pollution Investigation and Enforcement Division
P.O. Box 3378
Honolulu, HI 96801
808/548-6505

IDAHO

Waste
Department of Health and Welfare
Division of Environment
Bureau of Hazardous Materials
450 W. State Street
Boise, ID 83720
208/334-5879

Water
Department of Health and Welfare
Bureau of Water Quality
State House
Boise, ID 83720
208/334-5867

Air
Department of Health and Welfare
Division of Environment
Bureau of Air Quality
450 W. State Street
State House
Boise, ID 83720
208/334-5898

ILLINOIS

Waste
Environmental Protection Agency
Land Pollution Control Division
2200 Churchill Road
P.O. Box 19276
Springfield, IL 62706
217/782-6762

Water
Environmental Protection Agency
Division of Water Pollution Control
2200 Churchill Road
P.O. Box 19276
Springfield, IL 62794-9276
217/782-1654

Air
Environmental Protection Agency
Division of Air Pollution Control
2200 Churchill, IL 62794-9276 62706
217/782-7326/7327

Noise
Pollution Control Board
309 W. Washington Street, Suite 300
Chicago, IL 60606

INDIANA

Waste
Office of Solid and Hazardous Waste Management
105 South Meridian Street
P.O. Box 6015
Indianapolis, IN 46206-6015
317/232-3210

Water
Office of Water Management
105 South Meridian Street
P.O. Box 6015
Indianapolis, IN 46206-6015
317/232-8488

Air
Office of Air Management
105 South Meridian Street
P.O. Box 6015
Indianapolis, IN 46206-6015
317/232-8221

Noise
Environmental Management Board
1330 W. Michigan Street
Indianapolis, IN 46206

IOWA

Waste
Department of Natural Resources
Environmental Protection Division
Air Quality and Solid Waste Protection Bureau
Wallace State Office Building
900 East Grand Avenue
Des Moines, IA 50319
515/281-8690

Water
Department of Natural Resources
Surface and Ground Water Protection
Wallace State Office Building
900 East Grand Avenue
Des Moines, IA 50319
515/281-8690

Air
Department of Natural Resources
Environmental Protection Division
Air Quality and Solid Waste Protection Bureau
Wallace State Office Building
900 East Grand Avenue
Des Moines, IA 50319
515/281-8690

KANSAS

Waste
Department of Health and Environment
Solid Waste Management Division
740 Forbes Building
Topeka, KS 66620
913/862-9360

Water
Department of Health and Environment
Division of Environment
Bureau of Water Quality
Forbes AFB Building No. 740
Topeka, KS 66620
913/862-9360, x257

Air
Department of Health and Environment
Division of Environment
Air Quality and Radiation Control
Forbes AFB Building No. 740
Topeka, KS 66620
913/296-1500

Noise
Department of Transportation
Engineering Services
State Office Building
Topeka, KS 66612

KENTUCKY

Waste
Natural Resources and Environmental Protection Cabinet
Division of Waste Management
18 Reilly Road, Ft. Boone Plaza
Frankfort, KY 40601
502/564-6716

Water
Natural Resources and Environmental Protection Cabinet
Division of Water
18 Reilly Road, Ft. Boone Plaza
Frankfort, KY 40601
502/564-3410

Air
Natural Resources and Environmental Protection Cabinet
Division for Air Quality
18 Reilly Road, Ft. Boone Plaza
Frankfort, KY 40601
502/564-3382

Noise
Department For Environmental Protection
Natural Resources and Environmental Protection Cabinet
18 Reilly Road, Ft. Boone Plaza
Frankfort, KY 40601
502/564-5576

LOUISIANA

Waste
Department of Environmental Quality
Office of Solid and Hazardous Waste
Solid Waste Division
P.O. Box 44307
Baton Rouge, LA 70804
504/342-4677

Water
Department of Health and Human Resources
Office of Preventive and Public Health Services
Safe Drinking Water Program
P.O. Box 60630
New Orleans, LA 70160
504/568-5101

Air
Department of Environmental Quality
Air Quality Division
P.O. Box 44096
Baton Rouge. LA 70804
504/342-1206

MAINE

Waste
Department of Environnmental Protection
Bureau of Oil & Hazardous Materials Control
State House Station 17
Augusta, ME 04333
207/289-2631

Water
Department of Environmental Protection
Bureau of Water Quality Control
State House, Station 17
Augusta, ME 04333
207/289-3355

Air
Department of Environmental Protection
Bureau of Air Quality Control
State House, Station 17
Augusta, ME 04333
207/289-2437

MARYLAND

Waste
Department of the Environment
Hazardous and Solid Waste Management Administration
201 West Preston Street
Baltimore, MD 21201
301/225-5647

Water
Department of Natural Resources
Water Resources Administration
Tawes State Office Building
Annapolis, MD 21401
301/974-3846

Department of the Environment
Water Management Administration
201 West Preston Street
Baltimore, MD 21201
301/225-6300

Air
Department of the Environment
Air Management Administration
Bureau of Air Quality Control
201 West Preston Street
Baltimore, MD 21201
301/225-5235

MASSACHUSETTS

Waste
Executive Office of Environmental Affairs
Department of Environmental Quality Engineering
Solid and Hazardous Waste Division
1 Winter Street
Boston, MA 02108
617/292-5589

Water
Department of Environmental Quality Engineering
Division of Water Pollution Control
1 Winter Street
Boston, MA 02108
617/292-5673

Department of Environmental Quality Engineering
Division of Water Supply
1 Winter Street
Boston, MA 02108
617/292-5770

Air
Department of Environmental Quality Engineering
Division of Air & Hazardous Materials
1 Winter Street
Boston, MA 02108
617/292-5630

Noise
Division of Air Quality Control
Department of Environmental Quality Engineering
1 Winter Street
Boston, MA 02108
617/292-5630

MICHIGAN

Waste
Department of Natural Resources
Ground Water Quality Division - Solid Waste
P.O. Box 30028
Lansing, MI 48909
517/373-2794

Water
Department of Natural Resources
Water Resources Commission
Surface Water Quality Division
P.O. Box 30028
Lansing, MI 48909
517/373-1949

Air
Department of Natural Resources
Air Quality Division
P.O. Box 30028
Lansing, MI 48909
517/373-7023

Noise
Department of Transportation
425 West Ottawa
P.O. Box 30050
Lansing, MI 48909
517/373-2090

MINNESOTA

Waste
Minnesota Pollution Control Agency
Solid and Hazardous Waste Division
520 Lafayette Road North
St. Paul, MN 55155
612/296-7340

Water
Minnesota Pollution Control Agency
Division of Water Pollution Control
520 Lafayette Road North
St. Paul, MN 55155
612/296-7202

Air
Minnesota Pollution Control Agency
Division of Air Quality
520 Lafayette Road North
St. Paul, MN 55155
612/296-7331

Noise
Noise Pollution Control Section
Pollution Control Agency
1935 West County Road B-2
Roseville, MN 55113

MISSISSIPPI

Waste
Department of Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39209
601/961-5063

Water
Department of Natural Resources
Bureau of Pollution Control
P.O. Box 10385, Southport Mall
Jackson, MS 39209
601/961-5171

Air
Department of Natural Resources
Bureau of Pollution Control
P.O. Box 10385, Southport Mall
Jackson, MS 39209
601/961-5171

Noise
Department of Natural Resources
Bureau of Pollution Control
P.O. Box 10385, Southport Mall
Jackson, MS 39209
601/961-5171

MISSOURI

Waste
Department of Natural Resources
Division of Environmental Quality
Waste Management Program
Jefferson State Office Bldg.,
205 Jefferson Street
P.O. Box 176
Missouri Boulevard
Jefferson City, MO 65102
314/751-3176

Water
Department of Natural Resources
Water Quality Program
Division of Environmental Quality
Jefferson State Office Bldg.,
101 Jefferson Street
Jefferson City, MO 65102
314/751-1300

Air
Department of Natural Resources
Division of Environmental Quality
Air Pollution Control Program
Jefferson State Office Bldg.,
205 Jefferson Street
P.O. Box 176
Missouri Boulevard
Jefferson City, MO 65102
314/751-4817

Noise
Highway and Transportation Division
P.O. Box 270
Jefferson City, MO 65102
314/751-2551

MONTANA

Waste
Department of Health and Environmental Sciences
Environmental Sciences Division
Solid Waste Management Bureau
Cogswell Building
Helena, MT 59620
406/444-2821

Water
Department of Health and Environmental Sciences
Division of Environmental Sciences
Water Quality Bureau
Cogswell Bldg. Room A206
Helena, MT 59620
406/444-2406

Air
Department of Health and Environmental Sciences
Division of Environmental Sciences
Air Quality Bureau
Cogswell Bldg. Room A116
Helena, MT 59620
406/444-3454

NEBRASKA

Waste
Department of Environmental Control
P.O. Box 94877
State Office Building
Lincoln, NE 68509
402/471-2186

Water
Department of Environmental Control
Water Pollution Control Division
P.O. Box 94877
301 Centennial Mall
Lincoln, NE 68509
402/471-2186

Air
Department of Environmental Control
Air Pollution Division
P.O. Box 94877
301 Centennial Mall
Lincoln, NE 68509
402/471-2186

Noise
Air Pollution Control Division
Department of Environmental Control
Box 94877, State House Station
Lincoln, NE 68509

NEVADA

Waste
Department of Conservation and Natural Resources
Division of Environmental Protection
201 South Fall Street, Capitol Complex
Carson City, NV 89710
702/885-4670

Water
Department of Conservation and Natural Resources
Water Resources Division
201 South Fall Street, Capitol Complex, Nye Bldg.
Carson City, NV 89710
702/885-4380

Air
Department of Conservation and Natural Resources
Air Quality Office
Capitol Complex
201 South Fall Street
Carson City, NV 89710
702/885-4670

Noise
Department of Motor Vehicles
555 Wrightway
Carson City, NV 89701

NEW HAMPSHIRE

Waste
Department of Health and Human Services
Bureau of Solid Waste Management/Hazardous Waste Management
6 Hazen Drive
Concord, NH 03301
603/271-2900

Water
Water Supply and Pollution Control Commission
Health and Human Services Bldg.
6 Hazen Drive
P.O. Box 95
Concord, NH 03301
603/271-3504

Air
Air Resources Agency
64 N. Main Street
Concord, NH 03301
603/271-4582

NEW JERSEY

Waste
Department of Environmental Protection
Solid Waste Division/Hazardous Waste Bureau
401 East State Street
CN 402
Trenton, NJ 08625
609/292-9120/292-9877

Water
Department of Environmental Protection
Division of Water Resources
401 East State Street
P.O. Box CN029
Trenton, NJ 08625
609/292-1638

Air
Department of Environmental Protection
Division of Environmental Quality
Bureau of Air Pollution Control
401 East State Street
Trenton, NJ 08625
609/292-5450

Noise
Office of Noise Control
65 Prospect Avenue
Trenton, NJ 08618

NEW MEXICO

Waste
Health and Environment Department
Environment Improvement Division
Harold Runnels State Office Bldg.
1190 St. Francis Drive
P.O. Box 968
Santa Fe, NM 87504
505/827-2779; 827-2929

Water
Health and Environment Department
Environment Improvement Division
Surface Water Quality
Harold Runnels State Office Bldg.
1190 St. Francis Drive
P.O. Box 968
Santa Fe, NM 87504-0968
505/827-2918

Air
Health and Environment Department
Environment Improvement Division
Air Quality Bureau
Harold Runnels State Office Bldg.
1190 St. Francis Drive
P.O. Box 968
Santa Fe, NM 87504-0968
505/827-0070

Noise
Transportation Department
Motor Vehicle Division
Manual Lujan Sr. Building
St. Francis and Luisa Streets
Santa Fe, NM 87503

NEW YORK

Waste
Department of Environmental Conservation
Solid Waste Management Division/Bureau of Hazardous Waste
50 Wolf Road
Albany, NY 12233
518/457-5861/457-3254

Water
Department of Environmental Conservation
Division of Waters
50 Wolf Road
Albany, NY 12233
518/457-6674

Air
Department of Environmental Conservation
Division of Air Resources
50 Wolf Road
Albany, NY 12233
518/457-7230

Noise
Department of Environmental Conservation
Division of Solid Waste
Bureau of Hazardous Waste Technology
50 Wolf Road
Albany, NY 12233-0001

NORTH CAROLINA

Waste
Department of Human Resources
Division of Health Services
Solid and Hazardous Waste Management Branch
P.O. Box 2091
225 North McDowell Street
Raleigh, NC 27602
919/733-2178

Water
Department of Human Resources and Community Development
Division of Environmental Management
Water Quality Section
P.O. Box 27687
Raleigh, NC 27611
919/733-5083

Air
Department of Natural Resources and Community Development
Division of Environmental Management
Air Quality Section
P.O. Box 27687
Raleigh, NC 27611
919/733-6126

Noise
Noise Control Program
Air Quality Section
Division of Environmental Management
Department of Natural Resources and Community Development
P.O. Box 27687
Raleigh, NC 27611

NORTH DAKOTA

Waste
Health Department
Environmental and Waste Management Research Division
1200 Missouri Avenue
Bismarck, ND 58502
701/224-2382

Water
Department of Health
Division of Water Supply and Pollution Control
1200 Missouri Avenue, Room 203
Bismarck, ND 58502
701/224-2354

Air
Department of Health
Division of Environmental Engineering
1200 Missouri Avenue, Room 304
Bismarck, ND 58502
701/224-2348

OHIO

Waste
Environmental Protection Agency
Office of Land Pollution Control
361 East Broad Street
P.O. Box 1049
Columbus, OH 43215
614/466-7220

Water
Environmental Protection Agency
Waste Water Pollution Control
361 East Broad Street
P.O. Box 1049
Columbus, OH 43215
614/466-7427

Air
Environmental Protection Agency
Office of Air Pollution Control
361 East Broad Street
P.O. Box 1049
Columbus, OH 43215
614/466-6116

Noise
Bureau of Motor Vehicles
240 Parsons Avenue
P.O. Box 7167
Columbus, OH 43295
614/466-2550

OKLAHOMA

Waste
Health Department
Environmental Health Services
Industrial and Solid Waste Service
1000 NE 10th Street
Oklahoma City, OK 73152
405/271-5338

Water
Department of Pollution Control
P.O. Box 53504
1000 N.E. 10th Street
Oklahoma City, OK 73152
405/271-4677

Air
Department of Health
Environmental Health Services
Air Quality Service
1000 N.E. 10th Street, P.O. Box 53551
Oklahoma City, OK 73152
405/271-5220

Noise
Department of Health
1000 N.E. 10th Street, P.O. Box 53551
Oklahoma City, OK 73152

OREGON

Waste
Department of Environmental Quality
Solid Waste Division
Executive Building
811 SW Sixth Avenue
Portland, OR 97204
503/229-5356

Water
Department of Environmental Quality
Water Quality Division
Executive Building
811 SW Sixth Avenue
Portland, OR 97204
503/229-5324

Air
Department of Environmental Quality
Air Quality Division
Executive Building
811 SW Sixth Avenue
Portland, OR 97204
503/229-5397

Noise
Air Quality Control Division
Department of Environmental Quality
P.O. Box 1760
522 S.W. Fifth
Portland, OR 97207

PENNSYLVANIA

Waste
Department of Environmental Resources
Office of Environmental Protection
Bureau of Solid Waste Management
Fulton Building, P.O. Box 2063
Harrisburg, PA 17120
717/787-9870

Water
Department of Environmental Resources
Bureau of Water Quality Management
P.O. Box 2063 -- 11th Floor/Fulton Bldg.
200 N. 3rd Street
Harrisburg, PA 17120
717/787-2666

Air
Department of Environmental Resources
Bureau of Air Quality Control
P.O. Box 2063 - 18th Floor/Fulton Bldg.
200 N. 3rd Street
Harrisburg, PA 17120
717/787-9702

Noise
Department of Environmental Resources
P.O. Box 2062
Fulton Bank Building
Harrisburg, PA 17120

PUERTO RICO

Waste
Environmental Quality Board
Solid and hazardous Waste Bureau
P.O. Box 11488
Santurce, PR 00910
809/725-5140

Water
Environmental Quality Board
Division of Water/Water Resources
P.O. Box 11488
Santurce, PR 00910
809/725-5140

Air
Environmental Quality Board
Air Quality Bureau
P.O. Box 11488
Santurce, PR 00910
809/725-5140

RHODE ISLAND

Waste
Department of Environmental Management
Division of Land Resources
75 Davis Street
Providence, RI 02908
401/277-2787

Water
Department of Environmental Management
Division of Water Resources
75 Davis Street, 209 Canon Bldg.
Providence, RI 02908
401/277-2734

Air
Department of Environmental Management
Division of Air and Hazardous Materials
75 Davis Street
Providence, RI 02908
401/277-2808

SOUTH CAROLINA

Waste
Board of Health and Environmental Control
Bureau of Solid and Hazardous Waste
2600 Bull Street
Columbia, SC 29201
803/734-5200

Water
Department of Health and Environmental Control
Environmental Quality Control
2600 Bull Street
Columbia, SC 29201
803/734-5300

Air
Department of Health and Environmental Control
Bureau of Air Quality Control
2600 Bull Street
Columbia, SC 29201
803/734-4750

SOUTH DAKOTA

Waste
Department of Water and Natural Resources
Environmental Health Division
Joe Foss Building
Pierre, SD 57501
605/773-3329

Water
Department of Water and Natural Resources
Office of Drinking Water
Joe Foss Bldg., Room 209
120 E. Capitol
Pierre, SD 57501
605/773-3351

Air
Department of Water and Natural Resources
Office of Air Quality & Solid Waste
Joe Foss Bldg., 120 E. Capitol, Rm. 217
Pierre, SD 57501
605/773-3329

TENNESSEE

Waste
Department of Public Health
Bureau of Environmental Health Services
Solid Waste Management Division
Cordell Hull Building
Nashville, TN
615/741-3424

Water
Department of Public Health
Bureau of Environmental Health
Water Quality Control Division
344 Cordell Hull Bldg.
Nashville, TN 37219
615/741-3111

Air
Department of Public Health
Bureau of Environmental Health Services
Air Pollution Control Division
150 9th Ave. N.
Nashville, TN 37203
615/741-3931

TEXAS

Waste

Texas Water Commission
P.O. Box 13087
Capitol Station
Austin, TX 78711
512/463-7760

Water
Texas Water Commission
P.O. Box 13087
Capitol Station
Austin, TX 78711
512/463-8069

Air
Air Control Board
6330 Highway 290 East
Austin, TX 78723
512/451-5711

Noise
Department of Health
Division of Occupational Health & Radiation Control
Occupational Health Branch
1100 W. 49th Street
Austin, TX 78756
512/458-7111

UTAH

Waste
Department of Health
Division of Environmental Health
Bureau of Solid Waste Management
150 West North Temple Street
P.O. Box 2500
Salt Lake City, UT
801/533-4145

Water
Division of Environmental Health
Bureau of Water Pollution Control
P.O. 2500
150 West North Temple Street
Salt Lake City, UT
801/533-6146

Air
State Department of Health
Bureau of Air Quality
150 West North Temple Street
P.O. Box 2500
Salt Lake City, UT
801/533-6111

Noise
Department of Transportation
4501 South 27th West Street
Salt Lake City, UT 84119
801/965-4266

VERMONT

Waste
Environmental Conservation Agency
Waste Management Division
West Office Building
103 S. Main Steet
Waterbury, VT 05676
802/244-8702

Water
Water Quality
Department of Water Resources
103 South Main Street
Room 10 North
Waterbury, Vermont 05676
802/244-5638

Air
Agency of Environmental Conservation
Air Pollution Control
Bldg. 3 South
103 S. Main Steet
Waterbury, VT 05676
802/244-8731

Noise

Agency of Transportation
Division of Engineering and Construction
133 State Street
Montpelier, VT 05602

VIRGINIA

Waste
Department of Waste Management
101 North Fourteenth Street
11th Floor, Monroe Building
Richmond, VA 23219
804/225-2667

Water
State Water Control Board
P.O. Box 11143
Richmond, VA 23230
804/257-0056

Air
State Air Pollution Control Board
P.O. Box 10089
Richmond, VA 23240
804/786-2378

Noise
Virginia Department of Highways and Transportation
1404 E. Broad Street
Richmond, Virginia 23219
804/786-4304

WASHINGTON

Waste
Department of Ecology
Hazardous Waste Program
Mail Stop PV-11
Olympia, WA 98504
206/459-6000

Water
Department of Ecology
Office of Water Programs
Mail Stop PV-11
Olympia, WA 98504-8711
206/459-6000

Air
Department of Ecology
Office of Air Programs
Mail Stop PV-11
Olympia, WA 98504-8711
206/459-6000

WEST VIRGINIA

Waste
Department of Natural Resources
1201 Greenbriear St.
Charleston, WV 25311
304/348-5935

Water
Department of Natural Resources
Division of Water Resources
1800 E. Washington Street
Charleston, WV 25305
304/348-2107

Air
Air Pollution Control Commission
1558 Washington Street, East
Charleston, WV 25311
304/348-2275

WISCONSIN

Waste
Department of Natural Resources
Bureau of Solid Waste Management
101 South Webster Street
Madison, Wisconsin 53707
608/266-1327

Water
Department of Natural Resources
Division of Environmental Standards
Bureau of Water Resources & Mgt.
P.O. Box 7921
Madison, WI 53707
608/266-2121

Air
Department of Natural Resources
Division of Environmental Standards
Air Pollution Control Section
P.O. Box 7921
Madison, WI 53707
608/266-2121

Noise
Wisconsin Department of Natural Resources
Box 7921
Madison, WI 53707

WYOMING

Waste
Department of Environmental Quality
Solid Waste Management Program
122 West 25th Street
Cheyenne, WY 82002
307/777-7752

Water
Department of Environmental Quality
Water Quality Division
122 West 25th Street
Cheyenne, WY 82002
307/777-7781

Air
Department of Environmental Quality
Air Quality Division
122 West 25th St.
Cheyenne, WY 82002
307/777-7391

APPENDIX C
PRE-AUDIT ENVIRONMENTAL MANAGEMENT QUESTIONNAIRE

This pre-audit environmental management questionnaire is used by the U.S. EPA's environmental compliance program. It is intended to elicit background information from EPA operating facilities pertaining to their environmental pollution control activities. This background information assists EPA or their representatives in the planning and conducting of facility audits. Accurate and timely completion is requested.

	YES	NO	N/A	UNK
1. Air Pollution Control				
Does the facility:				
a. Have air emission permits or registrations?	___	___	___	___
b. Conduct air emission monitoring?	___	___	___	___
c. Conduct performance tests of air pollution control systems?	___	___	___	___
d. Emit any of the following air contaminants:				
- Beryllium?	___	___	___	___
- Asbestos?	___	___	___	___
- Mercury?	___	___	___	___
- Vinyl Chloride?	___	___	___	___
- Benzene?	___	___	___	___
- Volatile Organic Compounds?	___	___	___	___
- Arsenic?	___	___	___	___
- Radionuclides?	___	___	___	___
e. Dispense any fuels to trucks, automobiles or other vehicles?	___	___	___	___
f. Have an Air Episode Plan?	___	___	___	___
g. Perform maintenance on air cleaning devices, dispose of filters?	___	___	___	___

2. Water Pollution Control

Does the facility:

a. Discharge wastewater to:

- Navigable Waters? ___ ___ ___ ___
- A Publicly-Owned Treatment Facility? ___ ___ ___ ___
- A Privately-Owned Treatment Facility? ___ ___ ___ ___
- A Deep Well by Injection? ___ ___ ___ ___
- A Septic System? ___ ___ ___ ___

b. Have permits for these discharges? ___ ___ ___ ___

c. Make use of any on-site wastewater pretreatment or treatment? ___ ___ ___ ___

d. Monitor its wastewater discharges? ___ ___ ___ ___

e. Discharge any detectable amounts of the following:

- Aldrin/Dieldrin? ___ ___ ___ ___
- DDT/DDD/DDE? ___ ___ ___ ___
- Endrin? ___ ___ ___ ___
- Toxaphene? ___ ___ ___ ___
- Benzene? ___ ___ ___ ___
- PCBs? ___ ___ ___ ___
- Metals? ___ ___ ___ ___
- Corrosives? ___ ___ ___ ___
- VOCs? ___ ___ ___ ___

3. Safe Drinking Water

Does the facility:

a. Obtain any portion of its drinking water from on-site wells or surface water sources? ___ ___ ___ ___

b. Monitor its drinking water? ___ ___ ___ ___

	YES	NO	N/A	UNK
4. SPCC plan for oil in UST or above ground tank, or PCBs in temporary storage for disposal.				
Does the facility:				
a. Have a Spill Prevention Control and Countermeasure Plan?	___	___	___	___
b. Conduct spill prevention training?	___	___	___	___
c. Have a spill response team?	___	___	___	___
5. Solid and Hazardous Waste Management				
Does the facility:				
a. Have buried storage tanks containing oil or hazardous substances?	___	___	___	___
b. Generate hazardous waste in amounts:				
- Less than 100 kg/mo?	___	___	___	___
- Between 100 - 1000 kg/mo?	___	___	___	___
- In excess of 1000 kg/mo?	___	___	___	___
c. Generate acutely hazardous waste?	___	___	___	___
- In excess of 1 kg/mo?	___	___	___	___
d. Generate hazardous waste classified as:				
- Listed Wastes?	___	___	___	___
- Ignitable?	___	___	___	___
- Corrosive?	___	___	___	___
- Reactive?	___	___	___	___
- EP Toxic?	___	___	___	___
e. Have an EPA ID number?	___	___	___	___
f. Store wastes for longer than 90 days?	___	___	___	___
- For longer than 180 days?	___	___	___	___
- For longer than 270 days?	___	___	___	___

	YES	NO	N/A	UNK
g. Treat or dispose of hazardous wastes on-site using the following?				
- Incineration?	___	___	___	___
- Other Thermal Treatment?	___	___	___	___
- Landfill?	___	___	___	___
- Land Treatment?	___	___	___	___
- Physical/Chemical Treatment?	___	___	___	___
- Biological Treatment?	___	___	___	___
- Underground Injection?	___	___	___	___
- Elementary Neutralization Unit?	___	___	___	___
h. Have a written analysis plan?	___	___	___	___
i. Have a closure or post-closure plan?	___	___	___	___
j. Have a contingency plan?	___	___	___	___
k. Have a preparedness and prevention plan?	___	___	___	___
l. Transport its own wastes off-site?	___	___	___	___

6. PCB Management

Does the facility:

a. Have in use or storage (for reuse or disposal) any PCBs or PCB contaminated:				
- Transformers?	___	___	___	___
- Capacitors?	___	___	___	___
- Electromagnets?	___	___	___	___
- Hydraulic Systems?	___	___	___	___
- Lab Samples?	___	___	___	___
- Laboratory Standards?	___	___	___	___
- Other?	___	___	___	___

Specify _____

	YES	NO	N/A	UNK

7. Past Disposal Practices/Reporting of Releases

Does the facility:

a. Have a list of all potentially reportable hazardous substances on-site, with their locations and quantities?	___	___	___	___
b. Have a spill reporting procedure?	___	___	___	___

8. Environmental Assessment/Impact Statements

Does the facility:

a. Possess completed environmental impact statements or FNSIs for projects initiated within the last two years?	___	___	___	___

9. Radioactive Waste Management

Does the facility:

a. Have a Nuclear Regulatory Commission (NRC) License?	___	___	___	___
b. Generate radioactive waste from any of the following activities:				
- Tracers used for laboratory analysis?	___	___	___	___
- Radioactive samples?	___	___	___	___
- Other? _____	___	___	___	___
c. Generate mixed low level radioactive wastes?	___	___	___	___

10. Pesticide Control

Does the facility:

a. Generate any pesticide wastes?	___	___	___	___
b. Store pesticides for use as standards?	___	___	___	___
c. Engage in the application of pesticides?	___	___	___	___

11. The matrix below is designed to determine what regulatory areas apply to your facility, what regulatory agency administers applicable regulations (Federal/State/local government), and if your facility is required to have permits in any of these areas. Please check the appropriate boxes below.

	Applicable	Federal	State	Local	Permit
Air	_____	_____	_____	_____	_____
Water Sewer Discharge	_____	_____	_____	_____	_____
Surface Water Discharge	_____	_____	_____	_____	_____
Drinking Water	_____	_____	_____	_____	_____
Non-Hazardous Waste	_____	_____	_____	_____	_____
Hazardous Waste/ RCRA					
• Full Generator	_____	_____	_____	_____	_____
• 100-1000 kg/ month	_____	_____	_____	_____	_____
• Conditionally Exempt SQG	_____	_____	_____	_____	_____
Underground Storage Tanks	_____	_____	_____	_____	_____
Pesticide Control	_____	_____	_____	_____	_____
PCBs:					
• Research Activities	_____	_____	_____	_____	_____
• Contaminated Equipment	_____	_____	_____	_____	_____
Radioactive Materials	_____	_____	_____	_____	_____

APPENDIX D
CLEAN AIR ACT: NEW STATIONARY SOURCES FOR AIR POLLUTION 40 CFR PART 60

SOURCE CATEGORY	PROPOSAL DATE
Fossil fuel-fired steam generators (Subpart D)	August 17, 1971
Electric utility steam generating units (Subpart Da)	September 18, 1978
Industrial-Commercial-Institutional steam generating units (Subpart Db)	June 19, 1984
Incinerators (Subpart E)	August 17, 1971
Portland cement plants (Subpart F)	August 17, 1971
Nitric acid plants (Subpart G)	August 17, 1971
Sulfuric acid plants (Subpart H)	August 17, 1971
Asphalt concrete plants (Subpart I)	June 11, 1973
Petroleum refineries (Subpart J)	June 11, 1973
Storage vessels for petroleum liquids-for construction, reconstruction, or modification commenced after June 11, 1973 and prior to May 19, 1978 (Subpart K)	June 11, 1973
Storage vessels for petroleum liquids-for construction, reconstruction, or modification, commended after May 18, 1978, and prior to July 23, 1984 (Subpart Ka)	May 18, 1978
Volatile Organic Liquid Storage Vessels (including petroleum liquid storage vessesl) for which construction, reconstruction, or modification commenced after July 23, 1984 (Subpart Kb)	July 12, 1984
Secondary lead smelters (Subpart L)	July 11, 1973
Secondary brass and bronze production (Subpart M) plants	June 11, 1973
Iron and steel plants (primary emissions from basic oxygen furnaces constructed after June 11, 1973) (Subpart N)	June 11, 1973

SOURCE CATEGORY	PROPOSAL DATE
Iron and steel plants (secondary emissions from basic oxygen furnaces constructed after January 20, 1983) (Subpart Na)	January 20, 1983
Sewage treatment plants (Subpart O)	June 11, 1973
Primary smelters: Copper, Zinc, Lead (Subparts P-R)	October 16, 1974
Primary aluminum reduction plants (Subpart S)	October 23, 1974
Phosphate fertilizer industry: Wet process phosphoric acid plants; Superphosphoric acid plants; Triple superphosphate plants; Granular triple superphosphate storage facilities (Subparts T-X)	October 22, 1974
Coal preparation plants (Subpart Y)	October 24, 1974
Ferroalloy production facilities (Subpart Z)	October 21, 1974
Steel Plants: Eletric arc furnaces; Electric arc furnaces and Argon-Oxygen decarburization vessels constructed after August 17, 1983 (Subpart AA)	August 17, 1983
Kraft pulp mills (Subpart BB)	September 24, 1976
Glass manufacturing plants (Subpart CC)	June 15, 1979
Grain elevators (Subpart DD)	January 13, 1977
Surface coating of metal furniture (Subpart EE)	November 28, 1980
Stationary gas turbines (Subpart GG)	October 3, 1977
Lime manufacturing plants (Subpart HH)	May 3, 1977
Lead-acid battery manufacturing plants (Subpart KK)	January 14, 1980
Metallic mineral processing plants (Subpart LL)	August 24, 1982
Automobile and light-duty truck surface coating (Subpart MM)	October 5, 1979
Phosphate rock plants (Subpart NN)	September 21, 1979
Ammonium sulfate manufacture plants (Subpart PP)	April 10, 1980
Graphic Arts Industry: Publication rotogravure printing (Subpart QQ)	October 28, 1980

SOURCE CATEGORY	PROPOSAL DATE
Pressure sensitive tape and label surface coating operations (Subpart RR)	December 30, 1980
Industrial surface coating: large appliances (Subpart SS)	December 24, 1980
Metal coil surface coating (Subpart TT)	January 5, 1981
Asphalt processing and asphalt roofing manufacture (Subpart UU)	November 18, 1980 May 26, 1981
Equipment leaks of VOC in the synthetic organic manufacturing industry (Subpart VV)	January 5, 1981
Beverage can surface coating industry (Subpart WW)	November 26, 1980
Bulk gasoline terminals (Subpart XX)	December 17, 1980
New residential wood heaters (Subpart AAA)	February 18, 1987
Rubber tire manufacturing industry (Subpart BBB)	January 20, 1983
Flexible vinyl and urethane coating and printing (Subpart FFF)	January 18, 1983 October 11, 1983
Equipment leaks of VOC in petroleum refineries (Subpart GGG)	January 4, 1983
Synthetic fiber production facilities (Subpart HHH)	July 13, 1983
Petroleum dry cleaners (Subpart JJJ)	December 14, 1982
Onshore natural gas processing plants (Subpart KKK)	January 20, 1984
Onshore natural gas processing: SO_2 Emissions (Subpart LLL)	January 20, 1984
Nonmetallic mineral processing plants (Subpart OOO)	August 31, 1983
Wool Fiberglass Insulation Manufacturing Plants (Subpart PPP)	February 7, 1984
Magent tape coating facilities (Subpart SSS)	January 22, 1986
Industrial surface coating: Plastic parts for business machines (Subpart TTT)	January 8, 1986