

NEIC

EPA -330/9-87-001-R

MULTI-MEDIA COMPLIANCE
AUDIT PROCEDURES

June 1987

PROCESSED
EPA LEE
BTD

National Enforcement Investigations Center, Denver

U.S. Environmental Protection Agency



Office of Enforcement

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT AND COMPLIANCE MONITORING

EPA -330/9-87-001-R

MULTI-MEDIA COMPLIANCE
AUDIT PROCEDURES

June 1987

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
Denver, Colorado

CONTENTS

INTRODUCTION	1
PURPOSE	1
OBJECTIVES	2
SCOPE	2
PLANNING THE AUDIT	3
THE AUDIT TEAM	5
KNOWLEDGE AND SKILLS REQUIRED	5
INVESTIGATOR RESPONSIBILITIES	5
AUDIT PREPARATION	8
COMPILATION AND REVIEW OF BACKGROUND INFORMATION	8
Technical Information	8
Legal Information	10
Information Sources	11
NOTIFYING THE FACILITY	13
CONDUCTING THE AUDIT	16
ENTRY	16
OPENING CONFERENCE	20
GENERAL AUDIT PROCEDURES	21
Process Operations	22
Pollution Control, Treatment and Disposal	23
Operation and Maintenance (O&M)	25
MEDIA SPECIFIC AUDIT PROCEDURES	26
Air	26
Operating Conditions	27
Control Systems	27
Water	29
Solid/Hazardous Waste	30
Toxic Substances	41
Pesticides	50
Water Supply	52
CLOSING CONFERENCE	53
THE AUDIT REPORT AND FOLLOWUP	54

CONTENTS

REFERENCES

ACRONYMS

APPENDICES

A	SUMMARY OF POLLUTION CONTROL LEGISLATION
B	SAFETY PLAN
C	EVIDENTIARY PROCEDURES FOR PHOTOGRAPHS/MICROFILM
D	AIR POLLUTION CHECKLISTS
E	WATER POLLUTION CHECKLISTS
F	RCRA CHECKLISTS
G	CERCLA CHECKLIST
H	TSCA CONFIDENTIAL BUSINESS INFORMATION PROCEDURES AND FORMS
I	TSCA PCB CHECKLIST
J	TSCA SECTIONS 5 AND 8 CHECKLIST
K	PESTICIDE CHECKLIST
L	WATER SUPPLY CHECKLIST
M	UNDERGROUND INJECTION CONTROL (UIC) CHECKLIST

TABLES

1	Federal Statutes/Regulations for Multi-Media Compliance Audits	12
2	Background Review Information Sources	14
3	Inspection Authority Under the Major Environmental Acts	17
4	Summary of Federal Environmental Acts Regarding Right of Entry, Inspecting, Sampling, Testing, Etc.	18

INTRODUCTION

PURPOSE

This manual is intended as a guide for investigators who conduct multi-media compliance audits of facilities that discharge, emit, prepare, manage, store or dispose of pollutants controlled by Federal, State or local environmental laws and regulations. Investigative methods are presented which integrate the enforcement programs associated with air, water, solid waste, pesticides and toxic substances. This manual provides general activities and functions while focusing on special features of specific media and associated statutes.

The purposes of a facility multi-media compliance audit are to: (1) review a facility's pollution control practices; (2) evaluate operation, safety and waste management equipment and (3) determine status of compliance with applicable laws and regulations. The environmental laws which EPA administers and enforces are summarized in Appendix A. Emphasis is given to identifying violations of regulations, permits, approvals, orders and consent decrees, etc. and the underlying causes of such violations. Due to the complexity of laws and regulations, a comprehensive, in-depth review is not always possible. Investigators should conduct the most thorough review possible so that violations and problems that have an existing or potential effect on the environment are identified and adequately documented.

Pollution sources may vary in complexity depending on facility size, process operations and extent and efficiency of existing pollution controls. Time and personnel resources required to conduct compliance audits will vary accordingly. A large industrial facility with multiple process operations may require evaluation under several environmental statutes, such as the Clean Water Act (CWA), Clean Air Act (CAA), Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), Comprehensive Environmental Resource, Compensation and Liability Act (CERCLA) and Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). A multi-media compliance

audit of this magnitude requires an audit team with combined experience in all environmental media to effectively determine the pollution potential and/or compliance of the facility.

OBJECTIVES

This guide provides protocols for multi-media compliance audits. Specific objectives of such audits are to:

- Document facility noncompliance with environmental laws, regulations, orders, permits, consent decrees and approvals.
- Determine ability of a facility to maintain "continuous compliance" across all environmental areas.
- Identify need for remedial measures and enforcement action(s) to correct the causes of violations.

SCOPE

The multi-media compliance audit approach is designed to minimize the number of visits to a single facility. This manual addresses audit team activities before and during the onsite audit, report writing and followup procedures.

In performing compliance audits, investigators should follow established Agency policies and procedures for: (1) chain-of-custody and document control; (2) receipt and handling of confidential information; (3) employee conduct, responsibilities and ethics; (4) quality assurance and quality control; and (5) safety rules. When established policies and procedures do not exist, common sense, professional judgment and experience should be applied. Investigators need to collect valid, factual information and supporting data which are adequately documented to ensure that they will be admissible as evidence in any subsequent enforcement action(s).

PLANNING THE AUDIT

The success of an audit depends on thorough, up-front planning. Coordination with all interested and knowledgeable parties (e.g., Region, State, audit team members, NEIC supervisory staff) is essential to ensure a smooth operation. All the parties concerned should be identified and informed as soon as possible to ensure the necessary coordination.

A comprehensive plan (project plan) provides a means for informing all involved parties of the upcoming activities and ensuring an effective compliance audit. The project plan describes the project objectives, tasks required to fulfill these objectives, methods and procedures to be followed, resources required and schedules. The plan generally addresses the following:

Objectives - The plan defines what the audit is to accomplish (e.g., ". . .to assess environmental compliance with the regulations that apply to the source--water, air, etc.").

Tasks - The plan defines tasks for accomplishing the objectives and spells out procedures for obtaining the necessary information and evaluating facility compliance. The tasks usually involve an evaluation of process operations, pollution control/treatment and disposal practices, operation and maintenance practices, self-monitoring, recordkeeping and reporting practices and pollution abatement/control needs.

Procedures - The plan provides or references policies and procedures for document control, chain-of-custody, quality assurance, and handling and processing of confidential information. Unique instructions for the particular audit may also be provided.

Safety - The plan includes the written safety procedures which the EPA audit team must follow [Appendix B]. Additional safety procedures may be considered for the extensive or prolonged investigations.

Resources - The plan describes personnel needs and equipment requirements. Experienced and knowledgeable personnel shall compose the compliance audit team.

Schedules - The plan provides schedules for the audit activities. This information is important to the participants as well as the Headquarters, Regional and/or State officials who requested the project. The dates for (a) starting and finishing the field activities, (b) analytical work, and (c) draft and final reports should be established and agreed upon by all participants.

THE AUDIT TEAM

KNOWLEDGE AND SKILLS REQUIRED

The audit team should possess a good working knowledge of the various environmental pollution control statutes. Team members should understand the rules, regulations and other provisions, including permits, registrations, authorizations, limitations, monitoring requirements, etc., as they pertain to a specific facility. The investigators should have, as appropriate, knowledge of Agency policies and procedures, inspection authority, manufacturing and production processes, applicable pollution control technology, and the nature of pollution problems and possible solutions, including available treatment and controls.

Individual team members may have more specific knowledge of a process, monitoring system, control equipment, environmental media, regulation, etc. than others. The team, as a whole, however, should have collective knowledge and background to efficiently and effectively conduct all aspects of a facility audit. Moreover, investigators must be familiar with Agency policies and procedures and their authority to conduct inspections. They should also understand the techniques for evidence gathering and possess skill in collecting information and in interviewing officials of the public and regulated communities.

INVESTIGATOR RESPONSIBILITIES

Investigators represent the Agency when they deal with the regulated community and the public. They should conduct themselves in a professional manner and maintain their composure and credibility at all times. Cooperation and good working relations with facility personnel should be established, and maintained to the degree possible. EPA investigators must adhere to the regulations described in the EPA handbook "Responsibilities and Conduct for EPA Employees".

Applicable safety provisions and precautions are to be followed throughout the audit. For example, each team member will dress appropriately, including wearing protective clothing or equipment. Safety requirements must be identified before the onsite audit so that no delays occur. Investigators should provide their own safety equipment and should not rely on the facility, except in unique situations where special equipment may be required. All required "fit" testing and certifications must be completed in advance. In general, company safety requirements must be met in addition to the appropriate EPA requirements and guidelines addressed in the following documents:

Agency Safety Manual - Chapter 9, Hazardous Substances Responses

Agency Orders - 1000.18 Transportation of Hazardous Materials

- 1440.2 Health and Safety Requirements for Employees Engaged in Field Activities
- 1440.3 Respiratory Protection
- 1440.4 Health and Safety Training Requirements for Mine Safety
- 1440.6 Motor Vehicle Occupant Restraint Systems
- 1440.7 Hazard Communication
- 3100.1 Uniforms, Protective Clothing and Protective Equipment
- 3100.3 Authorization of Performance of Hazardous Duty

Agency Guidelines - Eye Protection Program Guideline

- Respiratory Protection Program Guideline
- Selection Guide for Chemical Protective Clothing
- Interim Health and Safety Guidelines for EPA Asbestos Inspectors

- Occupational Safety and Health Guidance Manual for
Hazardous Waste Site Activities

Information which is claimed or requested to be confidential must be handled properly to prevent disclosure to unauthorized persons. Investigators must have specific authorization for accessing and handling Confidential Business Information [TSCA Section 14]. They must be familiar with the confidentiality regulations to ensure that information is handled properly and to prevent disclosure to unauthorized persons.

AUDIT PREPARATION

COMPILATION AND REVIEW OF BACKGROUND INFORMATION

Collection and analysis of background information on the facility to be inspected are essential to the effective planning and overall success of a compliance audit. Materials can be obtained from the files of Federal, State and local agencies, technical libraries, EPA databases and other information sources. The background review will enable investigators to become familiar with facility operations, clarify technical and legal issues before entry, and develop a sound, factual audit report.

During a properly conducted background review, the investigator should identify both the technical and legal information needed and available. The types of information which may be acquired and reviewed are discussed below.

Technical Information

Facility Background

- Maps showing facility location and environmental and geographic features (stacks, discharge pipes, solid waste disposal sites, etc.)
- Geology/hydrogeology of the area
- Aerial photographs
- Names, titles, phone numbers of responsible facility officials
- Process description, process flow charts and major production areas
- Records reflecting changes in facility conditions since previous audit/permit application
- Production levels - past, present and future

Audit Reports, Records, and Files

- Federal and State compliance files
- Correspondence between the facility and the local, State and Federal agencies
- Citizens' complaints and reports, followup studies, findings
- Audit records, reports, correspondence on past incidents or violations
- Emissions inventory
- Self-monitoring data and reports
- EPA, State and consultant studies and reports
- Annual reports by the facility (e.g., PCB annual documents and inventories, Securities Exchange Commission §10K reports)
- Records, applications, reports, manifest files, etc. (e.g., RCRA reports, CERCLA submittals)
- Laboratory audit reports, QA/QC activities
- Records of previous hazardous substances spills

Pollutant and Waste Generation, Control, Treatment and Disposal Systems

- Description and design data for pollution control systems and process operations
- Sources and characterization of wastewater discharges, hazardous wastes, emissions, types of treatment and disposal operations
- Type and amount of waste generated which is discharged, emitted, stored, treated and disposed
- Waste storage, treatment and disposal areas
- Waste/spill contingency plans
- Available bypasses, diversions and spill containment facilities
- Industrial process, pollution control, treatment and disposal methods, monitoring systems

Legal Information

Requirements, Regulations and Limitations

- Permit applications, draft or existing permits, registrations, approvals and applicable Federal, State and local regulations and requirements
- Application certificates, EPA identification numbers
- Draft permits or information on draft permit terms which are different from current conditions
- Exemptions and waivers
- Receiving stream water quality standards, ambient air standards, State Implementation Plans, protected uses
- RCRA notification and Part A and Part B applications
- Pesticide labels
- Grant applications for publicly owned treatment works, Research & Development demonstration projects and progress reports on these projects
- Federal and State classification of facility (e.g., Interim Status, Small Quantity Generator, etc.)

Enforcement History

- Status of current and pending litigation against the facility*
- Deficiency notices issued to facility and responses by the facility
- Status of administrative orders, consent decrees or other regulatory corrective actions, if any, and compliance by the facility
- Penalties imposed against the company

* Coordination should occur prior to the audit (in conjunction with the Regional office) with the local Assistant United States Attorney or Justice Department attorney responsible for the civil or criminal case and any consent decree.

Information Sources

Laws and Regulations - Federal laws and regulations establish procedures, controls and other requirements applicable to a facility [Table 1]. In addition, State laws and regulations and sometimes even local ordinances may be applicable, or take precedence over the same facility.

Permits and Permit Applications - Permits provide information on the limitations, requirements and restrictions applicable to discharges, emissions and disposal practices; compliance schedules; and monitoring, analytical and reporting requirements. Applications provide technical information on facility size, layout and location of pollution sources; waste and pollutant generation, treatment, control and disposal practices; contingency plans and emergency procedures; and pollutant characterization - types, amounts, and locations of discharge, emissions or disposal.

Regional and State Files - These files often contain grant records, applications, facility self-monitoring data and audit reports, as well as permits and permit applications pertaining to individual facilities. These information sources can provide compliance, enforcement and litigation history; special exemptions and waivers applied for and granted or denied; citizen complaints and action taken; process operational problems/solutions; pollution problems/solutions; and laboratory capabilities. Consultant reports can provide design and operating data and recommendations for processes; pollutant sources; treatment, control and disposal systems; and remedial measures.

Technical Reports, Documents and References - These sources provide information on industrial process operations, data on available treatment, control and disposal techniques, such as their advantages or drawbacks, limits of application, etc. Such sources include Effluent Guideline and New Source Performance Standard development documents and EPA's Treatability Manual. Similar guidance documents on hazardous waste generation, treatment/disposal are also becoming available.

Table 1
FEDERAL STATUTES/REGULATIONS FOR MULTI-MEDIA COMPLIANCE AUDITS

	Air CAA	Water CWA	Superfund CERCLA	Pesticides FIFRA	Solid Waste RCRA	Drinking Water SDWA	Toxics TSCA
Inspection Authority	114 ^a , 211 ^a [80,86 ^b]	308, 402 [122.41]	104	8, 9 [160.15, 169.3]	3007,9005 [270.30]	1445 [142.34, 144.51]	11 [717.17, 792.15]
Recordkeeping Authority	114, 208 [51, 57, 58, 60, 61, 79, 85, 86]	308, 402 [122.41, 122.48]	103	4,8 [160.63, 169, 160.185-195]	3001, 3002, 3003, 3004, 9003 [262.40, 263.22, 264.74, 264.279, 264.309, 265.74, 264.309, 270.30]	1445 [141.31-33, 144.51, 144.54]	8 [704, 710, 717.15, 720.78, 761.180, 762.60, 763.114, 792.185-195]
Confidential Information	208, 307, [2.201-2.215, 2.301, 53, 57, 80]	308 [2.201-2.215, 2.302, 122.7]	104 [2.201-2.215]	7, 10 [2.201-2.215, 2.307]	3007, 9005 [2.201-2.215, 2.305, 260.2, 270.12]	1445 [2.201-2.215, 2.304, 144.5]	14 [2.201-2.215, 2.306, 704.7, 707.75, 710.7, 712.15, 717.19, 720.80-95, 750.16, 750.36, 762.60, 763.74]
Emergency Authority	303	504	104, 106 [300.53, 300.65]	27 [164.166]	7003	1431	7
Employee Protection	322	507	110		7001	1450	23
Permits Basic requirements include applica- tions, standard permit conditions, monitoring, reporting		[122,125]			[270]	[144,147]	
EPA procedures for permit issuance	[124]	[124]			[124]	[124]	
Technical requirements	[52]	[129, 133, 136, 302 ^c] BMP ^d [125] SPCC ^e [112] Waivers [125, 230]			[260-266]	[146,264]	
Specific References	NSPS ^f NESHAP ^g [61] CEM ^h [60] SIP ^j [52] PSD ^k [50]	Effluent guidelines [400-460] BMP [125], SPCC [112], Pretreatment [125, 403], Toxic [129]			Generators [262], Transporters [263], TSD ⁱ [265], Stds for TSD Permits [264], Interim Stds [265], Storage <90 days [262], Exemptions [261]		PCBs [761] Dioxin [775]

^a Statute (e.g., Clean Air Act, Section 114 or 211)
^b [80, 86] - 40 CFR, Parts 80 and 86; CFR refers to Code of Federal Regulations
^c Reportable quantities
^d BMP - Best Management Practices
^e SPCC - Spill Prevention Control and Countermeasures Plan

^f NSPS - New Source Performance Standards
^g NESHAP - National Emission Standards for Hazardous Air Pollutants
^h CEM - Continuous Emission Monitoring
ⁱ TSD - Treatment, Storage and Disposal
^j SIP - State Implementation Plan
^k PSD - Prevention of Significant Deterioration

The background information sources for all program areas and those that apply specifically to the water, air, solid waste pesticides and toxic substances programs are listed in Table 2.

NOTIFYING THE FACILITY

In most cases, notification for routine audits are announced to the facility, but are not required. In cases where there is concern that physical conditions may be altered prior to the audit or that records may be destroyed, an unannounced audit should be conducted. The initial contact is usually by phone with followup written confirmation of the anticipated audit period. The notification letter specifies the authority for the audit and outlines the areas to be covered during the audit and the information to be provided. This approach improves the chances that responsible facility officials will be present and that necessary information will be readily available.

Typical information requested in a notification letter for availability during the audit may include the following:

- Raw materials, imports, isolated intermediates, products, byproducts, production levels
- Facility maps identifying process areas, discharge and emission points, waste disposal sites
- Flow diagrams or descriptions of processes and waste control, treatment and disposal systems showing where wastewater, air emission and solid waste sources are located
- Description and design of pollution control and treatment systems and normal operating parameters
- Operations and maintenance procedures and problems
- Appropriate packaging and shipping labels
- Self-monitoring reports and inventories of discharges and emissions

Table 2
BACKGROUND REVIEW INFORMATION SOURCES

All Program Areas	Water Pollution CWA	Air Pollution CAA	Solid Wastes Pollution RCRA	Toxic Substances Pollution TSCA	FIFRA
NEIC Information Retrieval System data on corporate structure, financial conditions, pollution control history, environmental and health impacts of pollutants of interest	NPDES permits/permit applications/draft permits Applicable effluent guidelines Compliance inspection reports (Federal/State/local)	Air permits and permit Applications (Federal/State/local) Self-monitoring requirements and self-reported data Compliance inspection reports (Federal/State/local)	Part A of permit application (TSDs only) to designate type and volume of wastes handled, type and design capacity of treatment, storage and/or disposal processes Part B of permit application, if available	Available information on chemical substances produced by facility Applicable regulations regarding manufacture, identification, self-reporting requirements, concerning toxic materials (e.g., PCB rules)	Establishment numbers, Certified Applicator numbers Applicable labels Inspection reports (Federal/State)
EPA grants (R&D, constructing, planning)	Laboratory performance reports	Applicable NESHAP	Draft/final RCRA permit	Inspection reports (Federal/State/local)	EPA Pesticide Inspection Manual
Information available on process operations; pollutants of interest; existing treatment, control and disposal practices; raw materials; etc.	Self-monitoring requirements and self-reporting data Best Management Practices Plan	Applicable NSPS Applicable air quality standards State Implementation Plan	Applicable regulations for source designations Groundwater monitoring plans/data	Technical manuals and references on applicable treatment/control and disposal technology, inspection and monitoring procedures and techniques, etc.	State Facility Permits for procedures, bulk storage, etc.
Administrative Orders issued for environmental noncompliance	Spill Prevention Control and Countermeasure Plan	Ambient air quality reports for AQCR	UIC permit and present status		
Applicable local ordinances on environmental control	Pretreatment requirements if facility discharges to POTW	Air pollutants emission inventories	Hydrogeologic reports on local area relative to UIC permit		
Compliance history and present compliance status	Applicable Federal/State regulations related to water pollution control at facility	Continuous monitoring practices and facility and applicable performance inspections	Self-monitoring requirements and self-reported data		
Available correspondence between regulating officer and facility officials	Technical manuals and references on pollution treatment/control technology, process operation, monitoring inspection procedures, etc.	Available contractor/consultant reports	Applicable regulation on manifest requirements		
Available contractor/consultant report on facility environmental control matters		Technical manuals and references on applicable pollution treatment/control technology, process operators, air pollution monitoring, inspection procedures, etc.	Inspection reports (Federal/State/local)		
Environmental compliance schedules and present status	Interstate Commission water quality data (Ohio River Sanitary Commission, Delaware River Basin Commission, Interstate Commission on the Potomac River, etc.)		Technical manual and references on applicable treatment/control and disposal technology, inspection and monitoring procedures and techniques, etc.		
Available aerial photography					

- Self-monitoring equipment in use, normal operating levels and available data
- Required plans and records

CONDUCTING THE AUDIT

The compliance audit will consist of the following phases:

- Entry
- Opening conference
- The onsite inspection
- Closing conference

ENTRY

The team should arrive at the facility during normal working hours, unless special circumstances, such as suspected illegal activity at night, are being investigated. The investigators shall identify themselves to the owner, agent in charge or other responsible facility official; present their official Agency credentials to the facility official, whether requested or not; and explain the purpose of the audit. Tables 3 and 4 outline the various Federal environmental statutes which give Agency employees the authority to enter facilities, review records and collect samples.

If the audit is conducted at a Federal facility that has national security information, restricted or classified areas, special procedures may be required for entry. For example, a military installation regulation may stipulate that investigators shall provide proof of appropriate security clearance before entry is approved into restricted areas. When this occurs, the investigators should refer such special cases to their appropriate legal staff (e.g., Office of Regional Counsel).

When the facility provides a blank sign-in sheet, log or visitor register, it is acceptable for investigators to sign it. Note, however, that EPA employees must not sign any type of "waiver" or "visitor release" that would relieve the facility of responsibility for injury or which would limit the rights of the Agency to use data obtained from the facility. When such a waiver or release is presented, team members should politely explain they cannot sign such a document and request a blank sign-in sheet. If they are

Table 3
INSPECTION AUTHORITY UNDER THE MAJOR ENVIRONMENTAL ACTS

CAA - § 114(a)(2)

"...the Administrator or his authorized representative, upon presentation of his credentials - shall have a right of entry to, upon, or through any premises of such person or in which any records required to be maintained. . .are located, and may at reasonable times have access to and copy any records, inspect any monitoring equipment and method. . .and sample any emissions. . ."

CWA - § 308(a)(4)(B)

"...the Administrator or his authorized representative...upon presentation of his credentials - (i) shall have a right of entry to, upon, or through any premises in which an effluent source is located or in which any records required to be maintained. . .are located, and (ii) may at reasonable times have access to and copy any records, inspect any monitoring equipment or method. . .and sample any effluents which the owner or operator of such source is required to sample. . ."

RCRA - § 3007(a)

"...any person who generates, stores, treats, transports, disposes of or otherwise handles or has handled hazardous wastes shall upon request of any. . .employee or representative of the Environmental Protection Agency. . .furnish information relating to such wastes and permit such person at all reasonable times to have access to, and to copy all records relating to such wastes."

"...such employees or representatives are authorized. . .to enter at reasonable times any establishment or other place where hazardous wastes are or have been generated, stored, treated or disposed of or transported from; to inspect and obtain samples from any person of any such wastes and samples of any containers or labeling for such wastes."

TSCA - § 11(a)(b)

"...any duly designated representative of the Administrator, may inspect any establishment. . .in which chemical substances or mixtures are manufactured, processed, stored or held before or after their distribution in commerce and any conveyance being used to transport chemical substances, mixtures or such articles in connection with distribution in commerce. Such an inspection may only be made upon the presentation of appropriate credentials and of a written notice to the owner, operator or agent in charge of the premises or conveyance to be inspected."

FIFRA - § 8 and 9

"...any person who sells or offers for sale, delivers or offers for delivery any pesticide. . .shall, upon request of any officer or employee of the Environmental Protection Agency. . .furnish or permit such person at all reasonable times to have access to, and to copy: (1) all records showing the delivery, movement or holding of such pesticide or device, including the quantity, the date of shipment and receipt, and the name of the consignor and consignee. . ."

"...officers or employees duly designated by the Administrator are authorized to enter at reasonable times, any establishment or other place where pesticides or devices are held for distribution or sale for the purpose of inspecting and obtaining samples of any pesticides or devices, packaged, labeled and released for shipment and samples of any containers or labeling for such pesticides or devices."

"Before undertaking such inspection, the officers or employees must present to the owner, operator or agent in charge of the establishment. . .appropriate credentials and a written statement as to the reason for the inspection, including a statement as to whether a violation of the law is suspected."

"...employees duly designated by the Administrator are empowered to obtain and to execute warrants authorizing entry . . .inspection and reproduction of all records. . .and the seizure of any pesticide or device which is in violation of this Act."

SDWA - § 1445

"...the Administrator, or representatives of the Administrator. . .upon presenting appropriate credentials and a written notice to any. . .person subject to. . .any requirement. . .is authorized to enter any establishment, facility or other property. . .in order to determine. . .compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls and facilities or in order to test any feature of a public water system, including its raw water source."

CERCLA (Superfund) - § 104(e)

"Any officer, employee or representative of the President. . .is authorized to. . .

require any person. . .to furnish. . .information or documents relating to. . .identification, nature and quantity of materials. . .generated, treated or disposed. . .or transported. . .nature or extent of a release. . .ability of a person to pay. . ."

"...access. . .to inspect and copy all documents or records. . ."

"...to enter. . .place or property where any hazardous substance or pollutant or contaminant may be or has been generated, stored, treated, disposed of, or transported from. . .needed to determine the need for response. . ."

"...to inspect and obtain samples. . ."

Table 4
SUMMARY OF FEDERAL ENVIRONMENTAL ACTS
REGARDING RIGHT OF ENTRY, INSPECTIONS, SAMPLING, TESTING, ETC.

Act/Section	Designated Representative	Presentation of Credentials	Notice of Inspection	Sampling Permitted	Inspection of Records	Sample Splits	Receipt for Agency's Samples	Return of Analytical Results
<u>Clean Water Act</u> §308(a)	Yes, auth. by Administrator	Required	Not required	Yes (effluents which the owner is required to sample)	Yes	Not required	Not required	Not required
<u>FIFRA</u>	§8(b) (Books & Records)	Yes, designated by Administrator	Required	Written notice required with reason and suspected violation note	No	Yes	N/A	N/A
	§9(a) (Inspections of establishments)	Yes, designated by Administrator	Required	Written notice required with reasons for inspection	Yes	See §8	Required, if requested	Required, promptly
<u>Clean Air Act</u> §114(a)	Yes, auth. by Administrator	Required	Not required except notify State for SIP sources	Yes	Yes	Not required	Not required	Not required
<u>RCRA</u> §3007(a) 9005(a)	Yes, designated by Administrator	Not required	Not required	Yes	Yes	Required, if requested	Required	Required, promptly
<u>SDWA</u> §1445(b)	Yes, designated by Administrator	Required	Written notice required, must also notify State with reasons for entry if State has primary enforcement responsibility	Yes	Yes	Not required	Not required	Not required
<u>TSCA</u> §11(a,b)	Yes, designated by Administrator	Required	Written notice required	(The Act does not mention samples or sampling in this section. It does state an inspection shall extend to all things within the premise of conveyance.)	Yes	N/A	Yes	N/A
<u>CERCLA</u> §104(4)	Yes, designated by President	Not required	Not required	Yes	Yes	Required, if requested	Required	Required, promptly

refused entry because they do not sign such a release, the team should leave and immediately report all pertinent facts to the appropriate supervisory and legal staff. All events surrounding the refused entry should be fully documented, including the name of the person refusing entry.

Various Federal environmental statutes give Agency investigators the authority to enter facilities, review records and collect environmental samples [Tables 3 and 4]. The audit should be made with the consent of the facility owner and/or authorized person, unless the audit is conducted under a warrant. When the investigator is allowed to enter, entry is considered voluntary and consensual by the facility operator or owner, unless the investigator is expressly told to leave the premises. Consent to enter can, however, be revoked at any time during the audit. If this occurs, all information collected during the consensual phase remains in possession of the investigators. When withdrawal of consent takes place, the same procedures apply as for denial of entry.

Because audits may be considered adversary proceedings, investigators may be challenged as to their legal authority, techniques and competency. Facility personnel may also display antagonism to Agency personnel. In all cases, the investigators must courteously explain the authorities and the reasons for the protocols followed. If explanations are not satisfactory or disagreements cannot be resolved, the team should leave and obtain further direction from the appropriate Agency supervisory or legal staff.

In certain circumstances, audits will be conducted under authority of search warrants. A warrant is a judicial authorization for appropriate persons to enter specifically described locations and to perform certain audit functions. It is possible that a pre-audit warrant could be obtained when there is reason to believe that entry will be denied or when violations are expected which could be hidden during the time a search warrant was obtained. When authorized by a judge or magistrate, administrative search warrants can be served by a team member. Criminal search warrants, once obtained, are to be served by designated Federal law enforcement officials (e.g., U.S. Marshal, EPA criminal investigators) and not by an audit team member.

OPENING CONFERENCE

At the opening conference with facility officials, the project coordinator presents his or her credentials; provides names of the other team members, purpose of the audit and laws under which the audit is being conducted; and outlines procedures and proposed schedule to be followed. If not previously done, any required notices should also be presented to facility representatives at this time.* A cooperative working relationship should be established and is encouraged between the investigators and the facility officials; this arrangement will simplify assignments and contribute to the success of the compliance audit.

Major discussion topics at the opening conference should include: audit objectives, processes and areas to be inspected, anticipated audit schedules within various areas of the facility, basic types of records to be reviewed, safety requirements, the handling of confidential data (which should be obtained only if absolutely necessary), manner of handling questions during the course of the audit and the closing conference. Facility officials should be informed of their right, under RCRA, CERCLA/Superfund and FIFRA, to receive duplicates, replicates or splits of any samples taken and receive the results of analyses. If team members desire to take photographs or copies of records during the audit, this should also be discussed in the opening conference.

Photographs are used to prepare a thorough and accurate investigation report, as evidence in enforcement proceedings and to explain conditions found at the plant. The facility, however, may object to the use of cameras in their facility and on their property. If a mutually acceptable solution cannot be reached and photographs are considered essential to the audit, Agency supervisory and legal staff should be contacted for advice.

* Under FIFRA, TSCA and SDWA, written notification is required before entry. For "unannounced audits", this notification can be provided at the time of entry. Under TSCA, the investigator presents a TSCA Inspection Confidentiality Notice which informs the facility of their right to claim certain materials as Confidential Business Information (CBI).

Facility personnel may also request that photographs taken during the visitation be considered confidential, and the Agency is obliged to comply, pending further legal determination. Self-developing film, although often of poor quality, is useful in these situations. A facility may refuse permission to take photographs unless they can see the finished print. Duplicate photographs (one for the investigator and the other for the facility) should satisfy this need. When taking photographs considered TSCA Confidential Business Information (CBI), self-developing film eliminates processing problems, because the film processor must also have TSCA CBI clearance. Note, however, that some self-developing film may contain disposable negatives which must also be handled in accordance with the TSCA CBI requirements. Giving the facility the option of developing the film may resolve problems when self-developing film is not satisfactory.

Photographs must be fully documented, following procedures for handling evidentiary materials [Appendix C].

GENERAL AUDIT PROCEDURES

The general elements that are common to all environmental compliance areas--process operations, pollution control, treatment and disposal, and operation and maintenance are discussed below. Specific guidelines that complement the general elements are contained in the following section, organized by environmental media--air, water, solid/hazardous wastes, and toxic substances. Checklists are provided in the appendices.

Activities include reviewing records, reports and data; observing and evaluating equipment, monitors, devices or activities; and interviewing facility personnel. It is, therefore, important to have a knowledgeable facility representative(s) accompany the investigators during these segments of the audit.

Process Operations

Collectively, the audit team must have a basic understanding of the physical plant under investigation and the general processes used at the facility. This knowledge is necessary to aid in determining the substances (e.g., raw materials, products, byproducts, including waste materials) present at the facility and where these may be released as pollutants into the environment. The compliance audit team is not required to have an in-depth understanding of all the intricacies of the industrial processes, but investigators should have sufficient understanding to conduct a thorough and efficient audit.

The compliance audit team may perform the following:

- Determine if changes have occurred since the last audit, permit issuance, etc. in process units, their operation and flow diagrams by comparison with available information. Determine the present production level and rate of product, byproduct and waste generation. Determine the rate of raw material usage. Determine production process unit mode (e.g., continuous or batch). Information on production is essential if pollution control limits are based on production rates or products. Process modifications may have changed the types and loads of pollutants emitted, discharged or disposed. Different production levels could cause higher emission mass loadings or gas flow rates. Varying operating conditions can cause pollutant collection and control problems.

Identify those processes or physical elements of the facility which contribute to sources of pollution (air, water, solid/hazardous waste). Identify the sources, characterization, flow rates, etc. at points where wastewater, gaseous emissions and solid wastes are generated. Determine fate of byproducts (e.g., do they discharge or emit directly to the environment or to storage facilities or to a treatment facility). Determine types and amounts of pollutants being discharged.

- Determine the variability of process controls and production rates and their relationship to pollutant emission discharges, etc. Determine if production upsets are tied to pollution incidents, exceedences, etc. and the facility response to these upsets.
- Determine if process or facility modifications are proposed or planned. Obtain information on these modifications, including schedules, and certainty of the modifications (e.g., is the change proposed or planned, have funds been reserved). Obtain facility estimates on wastes generated and discharged.

Pollution Control, Treatment and Disposal

After investigators have determined which processes generate wastes, they should determine how the waste materials are handled and ultimately released, treated or disposed. This includes tracking the waste from generation to final disposition, using process flow diagrams, physical audits and facility records.

The compliance audit team may perform the following:

- Determine which waste streams are regulated by Federal, State or local regulations, licenses and approvals. In doing so, the investigators will be able to tailor their audit activities to the handling, disposal and treatment requirements of the appropriate regulations. Identification of the various items regulated under the established Federal regulations were shown in Table 1. Although it is desirable to obtain information on all waste streams generated (both those that are and those that are not specifically regulated), the emphasis must be placed on the handling of regulated wastes. This will ensure that the audit team accomplishes the major objective of determining compliance with applicable regulations in a reasonable period.

- Obtain updated descriptions and schematics of major pollution control equipment and waste storage/treatment/disposal areas. Visually inspect equipment and storage/treatment/disposal areas. Locate points of pollutant emission or discharge and waste disposal or storage, including alternative locations, such as diversions, bypasses and overflows.
- Obtain design data and startup dates for pollution control/treatment devices and waste disposal areas. Observe disposal areas and equipment. Observe disposal equipment during operation. Locate and observe indicating and recording instrumentation for monitoring control/treatment devices; compare operating levels to design specifications to determine if devices are operating normally. Review operations maintenance and inspection records. Identify any operating problems and their probable causes.
- Evaluate sampling techniques, equipment and locations used for collection of representative samples. Identify recycle and dilution streams and other flow characteristics and relate to the sampling locations. Determine if samples are being collected consistently with permit/regulation requirements (e.g., grab vs. composite) and frequency of sample collection. Observe monitoring procedures such as flow measurement, sample collection and preservation, calibration procedures, in-stack monitors, etc. Determine if proper parameters are being monitored, if the methods and records are consistent with permits and regulations, and if results are properly calculated and reported. Evaluate quality assurance/quality control procedures followed by the Company.
- Determine facility plans to expand existing treatment facilities and install new treatment units. Obtain copies of design criteria, consultants' reports, etc. Based on these data and first-hand observations, determine what additional treatment may be required to meet existing permit limits, regulations and other requirements.

- Evaluate compliance with schedules, including status of engineering plans and equipment design, procurement, fabrication, installation and testing and startup of equipment. Determine if the final requirements can be achieved on time; verify if structures are in place. Determine any delays associated with particular construction schedule and possible violations. If schedules are not being met, determine if the facility has rescheduled activities; for example, corporate resolutions, financing agreements, contracts, equipment orders and engineering services documents. Verify dates when documents were completed. These documents may be procured through a formal written request so they can be studied in depth. Determine if recruitment and training of new personnel (and potential new hires) for new pollution control activities have been initiated.

- Review laboratory analytical methods, procedures, recordkeeping and quality control measures. Determine if the methods conform to permit and regulatory requirements. Determine if laboratory quality assurance and quality control are sufficient to evaluate data (e.g., proper and timely calibration, fresh chemical reagents, scheduled equipment maintenance, etc.). In some cases, laboratory evaluations may involve offsite (company or contract) laboratories. In these cases, determine whether the offsite labs have already been evaluated by EPA as part of the contract program, other compliance, etc.

Operation and Maintenance (O&M)

Knowledge of the operation and maintenance practices for the process and control facilities provides the investigator insight into plant management and problems including frequency of breakdowns, malfunctions, upsets, outages, diversions, spills and leaks, bypasses and waste variability. It is important to determine the causes of these incidents and if they can be corrected. O&M review includes preventive, routine, and remedial maintenance programs; spare parts inventory; emergency operating and response programs;

training and certification of plant personnel; alarm systems for power and equipment failures; backup systems; and housekeeping practices throughout the plant. The O&M review also includes review of facility and corporate policies and protocols and schedules for such items as reading and calibrating instrumentation, examining recording charts and logs, and updating O&M manuals, engineering drawings and specifications, supplier manuals, and data cards on equipment.

The compliance audit team may determine major factors which affect process discharge, emissions, disposal, controls and changes in operation. O&M practices should be evaluated as to whether they are adequate for the proper management of pollution control equipment. Abnormal releases can be due to progressive equipment deterioration or lack of repair. Also, as equipment ages, efficiency drops and original removal rates cannot be achieved. Startup and shutdown of process and control facilities can create problems of surge waste releases which may be alleviated by improved plant management.

MEDIA-SPECIFIC AUDIT PROCEDURES

Air

Air pollution audit items are divided into four groups: (1) operating conditions, (2) control systems, (3) continuous monitoring and (4) compliance records and testing. The team should be prepared to observe, review and document these audit items so that factual information can later be evaluated and compliance determined. Before the audit, the checklists in Appendix D which address the New Source Performance Standards (40 CFR Part 260) and the National Emissions Standards for Hazardous Air Pollutants (40 CFR Part 61), including asbestos, should be reviewed. Furthermore, an updated emissions inventory will provide a listing of regulated point sources within the facility.

Operating Conditions

- Determine if construction and operating permits are current.
- Review records to determine if facility is operating within the limitations of the permit.
- Review records for abnormal operations, shutdowns, malfunctions. Determine cause, frequency and potential impact on emissions.
- Determine if any operational changes (feedstock, fuel flow rate, temperature changes, etc.) have been made that could potentially affect emissions.
- Observe evidence of air pollution effects on premises, especially over surrounding areas (e.g., odors, dusting, deposits on cars, vegetation damage). Fugitive emissions may require special attention. Odor problems may best be characterized outside the plant because of olfactory fatigue inside the plant.

Control Systems

- Compare observed operating conditions with baseline values obtained from compliance stack tests or from manufacturer's specifications.
- Compare control equipment monitoring values (pressure drop, flow rates, primary and secondary currents, etc.) with permit and/or regulatory requirements.
- Conduct control system evaluation. Review instrumentation, design and operational flow rates, temperatures, pressure drops and emission monitors. From these data, the investigator should be able to determine if the plant is achieving compliance under normal circumstances.

- Review control equipment maintenance procedures, malfunctions and corrective actions taken.
- Check number of emissions violations and any complaints filed since the last audit.

Continuous Emission Monitoring (CEM)

- Review operational (calibration, span, checks, etc.) and maintenance practices.
- Review records for excess emission reports (EERs) and determine cause.
- Review Performance Specification Tests and compare with 40 CFR 60, Appendix B requirements.
- Correlate the opacity monitor readings with VEOs.

Compliance Records and Testing

- Check source records for compliance with applicable regulations, including NESHAP, NSPS.
- Review records of compliance test results. The facility should be able to provide proof that emissions have been within desired limits by means of a compliance test using a specified or reference test method (40 CFR Part 260, Appendix A). The test is usually witnessed by control agency officials. Process and emission parameters should be adequately documented during test.
- Determine if onsite visible emission observations are warranted; an investigator doing CAA audits must be certified for visible emissions reading or the information developed may require duplication.

Water

Important water pollution audit components are categorized as control and treatment systems, self-monitoring systems (including both field and laboratory measurements), operation and maintenance, and the Best Management Practices (BMP) plan. Before the audit, the investigators should review the checklists in Appendix E. The appendix also includes the Spill Prevention Control and Countermeasure (SPCC) plan which companies are required to develop and maintain to prevent or control spills of petroleum and related products. Note that spills of hazardous substances are covered by 40 CFR 117.

Control and Treatment Systems

Assess the ability of the wastewater treatment plant to withstand shock loads, low temperature, excess stormflows, peak process flows and shock organic loads by reviewing past operating data. Assess impact of stormflows, inflow and infiltration on system operation. Determine if SPCC plan meets §311 requirements of the CWA (see 40 CFR 112).

Self-monitoring Systems

Self-monitoring consists of flow and water quality measurements and sampling by the facility in addition to the laboratory which analyzes water samples required under the National Pollutant Discharge Elimination System permit program.

Field - Confirm that acceptable sampling and flow measurement, as specified by the NPDES permit, are carried out at the correct locations and with the proper frequency, and that all necessary calibrations and O&M are performed. Samples must be collected at prescribed locations. Flow rating and calibration must use standardized techniques. Clean and properly prepared containers must be used in sampling. Adequate procedures are to be used in the handling, preserving and transporting of samples [Appendix E].

Laboratory - Evaluate analytical procedures including: (1) preservation methods and holding times of samples, (2) use of approved analyses (40 CFR 136 or approved alternatives), (3) adequacy of instrument calibration and state of repair, (4) adequacy of QA/QC program for all analyses, and (5) recordkeeping and calculations in the lab. Other important areas include cleaning and use of glassware, condition of laboratory instrumentation, reagent quality control, and media preparation and sterilization techniques.

Evaluate how the data are entered into lab notebooks; the sign-off procedures used; analysis of spikes, blanks and reference samples; how the lab data are transposed onto the official, self-monitoring report forms going to the enforcement agency; and the extent and capability of outside contract laboratories, if used.

Operation and Maintenance

Observe if vital treatment units are out of service and causes of non-service, if there is excess accumulation of solids, scum, grease and floating materials in the treatment units, or if there is a presence of odors, excessive weed growth, etc. Assess handling, treatment and disposal of sludges and other residues generated from processes and wastewater treatment system.

Best Management Practices (BMP) Plan

Check for BMP plan if the facility handles toxic pollutants. A BMP plan may be required by the NPDES permit or may be needed if toxics are contributed from ancillary operations and reasonable opportunity exists for discharge (40 CFR 125, Subpart K). BMP and SPCC plans, documents and facilities should be reviewed.

Solid/Hazardous Waste

The initial step in evaluating compliance with solid/hazardous waste requirements of a facility is to identify all waste streams and determine

which are regulated by Federal*, State** or local regulations, licenses and approvals. Preferably, this determination is initiated during background document review before the onsite facility audit and supplemented/modified using information obtained during an onsite evaluation. All waste streams generated (even those that the generator claims are not regulated) must be evaluated for regulatory inclusion. This will allow the investigator to determine whether or not the generator has properly identified all of the regulated waste streams.

Once regulated waste is identified, the investigator can track the material from generation to final onsite disposition (onsite treatment/disposal) or storage and transport for offsite disposal and determine compliance with applicable regulations. Throughout the audit, the investigator must keep in mind that both past and present activities need to be evaluated for compliance with applicable regulations.

In general, the compliance evaluation for solid/hazardous wastes handled at a facility includes obtaining, reviewing and evaluating information from Federal, State and local regulatory agency files; interviews with facility personnel regarding waste management activity; examination of facility records, including any internal waste tracking/storage/disposal logs, audit records and visual audit of waste management units. An integral part of any evaluation is the compilation of facility background information including facility size, physical description of operating units (area, depth, volume, etc.) and construction methods (presence/absence of liners, special compacting, etc.).

Prior to or during the onsite audit, the investigator must determine how extensive a records review will be necessary to meet the compliance evaluation objectives of the audit. Factors such as the number of documents available, resource allocation and time constraints determine whether the

* Definitions, identification and listing of Federally regulated waste are given in 40 CFR 260 and 261 and CERCLA §101.

** Nonhazardous solid waste is usually regulated by the State and these regulations must be obtained to evaluate applicable facility activity.

objectives are realistic and can be achieved; however, in all cases, the records review must be sufficient to demonstrate facility compliance or noncompliance. Often, because of time constraints, it may be necessary to obtain copies of documents (either microfilm or photocopies) for future offsite review and evaluation. To ensure effective use of resources, documents reviewed/copied while onsite should be limited to those containing information within the scope of the audit.

Investigators are encouraged to use the various RCRA evaluation checklists [Appendix F] during the audit to supplement their knowledge of the RCRA regulations and to ensure that all items under each activity are adequately addressed. The investigator should also be aware of the requirements of CERCLA, including a facility's responsibilities to notify the proper regulatory authorities of former hazardous substance releases and sites (non-interim status) where hazardous substances have been stored, treated or disposed of [CERCLA, Section 103(a) and (c)]. Military installations are also responsible for conducting site assessments through remedial action programs to identify past hazardous substance releases and handling facilities [40 CFR 300.64-68]. The investigator should determine, through records review, interviews, etc., whether all RCRA and CERCLA [Appendix G] sites have been reported to the proper authorities. The investigator should also evaluate assessment and response programs at a facility, if this objective is within the scope of the audit.

Additionally, the facility should be evaluated concerning State and local requirements controlling past and current disposal of municipal waste, nonhazardous industrial waste and construction debris. The information concerning such past disposal activities may lead to unreported RCRA and CERCLA sites.

Areas of potential facility noncompliance must be documented as thoroughly as possible. Document copies and photographs should be included for future reference and evidence.

Information obtained during the audit inspection will be used, with the applicable regulations, licenses, approvals, etc., to evaluate the facility's waste handling activities and determine status of compliance as outlined in the following sections.

General Facility RCRA Status

The investigator should determine if the facility has notified EPA of its hazardous waste handling activities (waste generation, transport, treatment, storage or disposal) and if it has a required EPA identification number (40 CFR 262.12).

For treatment, storage or disposal (TSD) facilities, [Section 2010(e) of RCRA], determine if a RCRA Part A application has been submitted (40 CFR 270). Determine the permit status of the facility. Has the RCRA Part B permit application been requested by, submitted to (if so, when), or reviewed by EPA; has the facility been issued a Part B permit? If a permit has been issued, the facility is subject to the specific permit provisions and requirements of the permit and 40 CFR, Part 264. If no RCRA Part B permit has been issued, the facility is subject to the interim status provisions of 40 CFR, Part 265. In both cases, the facility may also be subject to requirements of State/local regulations, licenses and approvals. Before the audit, the investigator should determine if State/local regulations apply. The investigator should have a copy of the current Part A application (with amendments), the Part B application (if available) and the RCRA permit (if applicable) during the audit so that the accuracy of the Part A and Part B applications can be verified and compliance with the permit determined.

Hazardous Waste Generating Facilities

Generators, as defined in 40 CFR 260.10, are subject to the requirements of 40 CFR 262 and any additional State/local regulations, licenses and approvals. In general, determine if the waste is properly identified and the waste containers are properly marked, including the date when waste accumulation was initiated. Also ensure the generator has obtained an EPA

identification number (40 CFR 262.12). Because generators are not authorized to accumulate waste longer than 90 days or 180 or 270 days for conditionally exempt small quantity generating, it is important to determine length of accumulation of all waste in storage.* Determine if the generator has maintained signed hazardous waste shipping manifests for waste shipped offsite for the last 3 years and evaluate if these manifests were completed/ handled properly (40 CFR 262, Subpart B). The facility's "Contingency Plan and Emergency Procedures," "Preparedness and Prevention Plans," and "Personnel Training Program" should also be evaluated (40 CFR 265, Subparts C and D and CFR 265.16).

The investigator should determine whether the facility is properly managing containers and tanks (40 CFR 265, Subparts I and J). All containers onsite during the audit should be inspected for general condition (leaks, corrosion, etc.) and proper packaging, labeling and marking (40 CFR 262, Subpart C). The investigator should determine if all storage area inspections are performed regularly and documented.

The investigator should determine whether the generator manages hazardous wastes that are burned for energy recovery and therefore subject to the requirements of 40 CFR Part 266, Subparts D or E. If these requirements are applicable, the generator is either a marketer or burner and must satisfy the respective notification, storage and recordkeeping requirements. If used oil that meets specification [§266.40(e)] is burned, only the analysis and recordkeeping requirements of §266.43(b)(1) and (6) need to be met. The investigator should review the checklist of Table F-14 [Appendix F] before conducting the audit.

The investigator should also determine if the generator is managing a waste subject to the land disposal prohibitions of 40 CFR Part 268. If the waste is a restricted waste the investigator should determine whether the

* If a generator has stored waste for more than 90 days [262.34(a), (b) and (c)], it is subject to the Federal requirements of 40 CFR 265 and 40 CFR 270 or the comparable State requirements in authorized states. Small quantity generators are subject to different requirements [261.5, 262.34(d), (e) and (f)].

waste is restricted as a result of constituent concentrations and if one of several extensions or exemptions apply. Generators of restricted wastes are required to:

- Determine whether they generate restricted wastes
- Determine waste traceability groups and treatment standards
- Determine whether waste exceeds treatment standards
- Provide for appropriate treatment and/or disposal
- Satisfy documentation, recordkeeping, notification, certification, packaging and manifesting requirements.
- Meet applicable requirements if the generator is or becomes a TSDF. Appendix F also contains checklists for specific land disposal requirements placed on generators.

Hazardous Waste Transporters

Hazardous waste transporters, as defined in 40 CFR 260.10, are required to comply with the Federal requirements of 40 CFR 263 and any State/local regulations, licenses and approvals. The transporter must also meet applicable requirements of 49 CFR 171-179.

The investigator should ensure that the transporter has obtained an EPA identification number (40 CFR 263.11) and is completing and handling the waste shipping manifests properly, including maintaining a copy of each one for at least 3 years. If a transporter stores waste in a transfer facility (40 CFR 263.12), determine length of storage of waste at the facility.* Any containers of waste in a storage facility should be inspected

* Under Federal regulations (40 CFR 263.12), transporters can only store waste at a transfer facility 10 days or less. State regulations may differ.

for proper condition and proper marking and labeling. If loaded trucks are present, proper placarding should be checked.

Treatment, Storage and Disposal Facilities

The investigator should determine if present facility operations and types and quantities of waste handled are the same as those authorized by the original Part A permit application (and approved amendments) or the final RCRA permit, as applicable. Ensure that the TSD facility has obtained an EPA identification number (40 CFR 265.11/264.11). Operations at all TSD facilities must be evaluated for compliance with the general requirements of Subparts A through H of either 40 CFR 265 or 40 CFR 264. The investigator should determine which of these subparts are applicable to each facility. Compliance evaluation of a facility includes, but is not limited to, evaluation of:

Waste Analysis Procedures (40 CFR 265/264.13, Subpart B)

- written waste analysis plan
- analytical/sampling procedures
- recordkeeping

Facility Security (40 CFR 265.14)

- access to the facility
- display of warning signs

General Facility Audit Requirements (40 CFR 265.15/264)

- written audit plan
- remedial action
- recordkeeping

Personnel Training (40 CFR 265.16/264)

- written training plan
- recordkeeping

Facility Preparedness and Prevention (40 CFR 265/264, Subpart C)

- general maintenance
- communications/alarm system
- fire control equipment
- arrangements with local authorities

Contingency Plan and Emergency Procedures (40 CFR 265/264, Subpart D)

- written contingency plan
- availability of emergency coordinator

Manifest System, Recordkeeping (40 CFR 265/264, Subpart E)

- use, handling and maintenance of shipping manifests
- facility operating record (including waste characterization/ quantity, waste tracking, disposal and treatment location)

Groundwater Protection (40 CFR 265/264, Subpart F)

- monitoring system (well location, design, operation)
- sampling and analysis
- data recordkeeping
- characterization of site hydrogeology
- preparation, evaluation and response
- waiver request (if any)
- detection vs. assessment monitoring
- corrective action plan(s)

Closure and Post-Closure (40 CFR 265/264, Subpart G)

- written closure/post-closure plans

Financial Requirements (40 CFR 265/264, Subpart H)

- financial assurance
- closure costs

When evaluating facility compliance with regulations requiring written plans (waste analysis, facility audits, contingency, training, closure), copies of the plans should be obtained for an in-depth analysis of their adequacy. By observing actual facility operations, such as self-inspection records, the investigator should determine whether or not the facility is actually following the specifics of these plans. In many cases, a facility may have used several modifications of these plans, all with different effective dates. All current plans must be evaluated. Out-of-date plans should also be reviewed for compliance with applicable regulations in effect at the time those plans were in place.

The investigator must also evaluate facility records required to be maintained by the regulations (operating records, manifests, waste analysis results, audit records, etc.). The extent of this records review must be sufficient to determine patterns of compliance/noncompliance with the recordkeeping requirements. Although it may be desirable to review all available records (from the time the regulations became effective), in the most comprehensive audit, this is not always possible due to the number of documents and time and resource constraints. In these cases, the investigators must decide on the minimum number of records necessary to identify patterns of compliance/noncompliance. There may also be a necessity to limit the time frame for documents review. Documentation (investigators' notes, copies of documents and photographs) of noncompliance must be obtained for future use and evidence.

The investigator should determine whether the TSD is handling a waste subject to the land disposal prohibitions of 40 CFR Part 268 and as set forth in the revisions to 40 CFR Parts 260 to 265 and 270 (51 Federal Register 40636 et seq). Appendix F contains a checklist that highlights specific requirements placed on storage, treatment and disposal facilities regarding the land disposal prohibitions. A review of the checklist before the inspection is recommended because the requirements are dependent upon the type of facility being inspected.

In addition to the general requirements specified above, the investigators must evaluate the facility for compliance with the specific requirements for each type of hazardous waste management activity. This includes, but is not limited to, an evaluation of:

Use and Management of Containers (40 CFR 265/264, Subpart I)

- general operation procedures
- condition of containers (leaks, corrosion, etc.)
- marking and labeling of containers
- compatibility of waste with containers
- management of containers
- audit records

Tanks (40 CFR 265/264, Subpart J)

- general operating procedures
- compatibility of waste with tank construction material
- integrity of tanks
- corrosion rate of tank materials
- compatibility between waste treated/stored in tanks
- audit records
- closure procedures

Surface Impoundments (40 CFR 265/264, Subpart K)

- general operating procedures
- freeboard levels
- protective coverings of dikes
- audit records
- closure/post-closure provisions

Waste Piles (40 CFR 265/264, Subpart L)

- general operating procedures
- protection from wind dispersal of waste

- compatability between various wastes within the pile
- run-on protection
- runoff characteristics, containment and handling
- closure/post-closure provisions

Land Treatment (40 CFR 265/264, Subpart M)

- general operating procedures
- runoff/run-on control provisions
- waste analysis
- waste loading
- protection of food chain crops
- unsaturated zone (zone of aeration) monitoring
- recordkeeping
- closure/post-closure provisions

Landfills (40 CFR 265/264, Subpart N)

- general operating procedures
- run-on/runoff control and management
- protection from wind dispersal
- recordkeeping
- required treatment of ignitable/reactive waste and liquid material (prior to landfilling)
- leachate collection/handling procedures
- closure/post-closure provisions

Incinerators (40 CFR 265/264, Subpart O)

- general operating procedures
- waste analysis
- startup/shutdown procedures
- monitoring/control equipment and provisions (combustion and emission control)
- audits
- closure procedures

Thermal Treatment (40 CFR 265, Subpart P)

- general operating conditions
- waste analysis
- monitoring/control equipment and procedures (combustion and emission controls)
- open burning/waste explosives procedures
- audits
- closure

Other Chemical/Physical Treatment (40 CFR 265/264, Subpart Q)

- general operating procedures
- waste analysis
- monitoring/control equipment
- audits
- closure

Toxic Substances

This section describes those specific aspects of toxic chemical control that are addressed by the Toxic Substances Control Act (TSCA) and its associated rules and regulations (40 CFR Parts 702 to 799).

The regulation of toxics under TSCA is subdivided into two components for Agency enforcement program management purposes.

- "Chemical control" covers enforcement aspects related to specific chemicals regulated under Section 6 of TSCA, such as polychlorinated biphenyls (PCBs), chlorofluorocarbons (CFCs) and asbestos.
- "Hazard evaluation" refers to the various recordkeeping, reporting and marketing submittal requirements specified in Sections 5, 8, 12 and 13 of TSCA; although, some elements of what might be termed "chemical control" are also addressed in these sections. Sections 12 and 13 of TSCA, which pertain to chemical exports and imports, respectively, will not be covered in this manual due to their special nature and unique requirements.

Prior to discussing TSCA activities* at a facility, the investigator must present appropriate facility personnel with copies of the following two TSCA audit forms [Appendix H]:

Notice of Inspection - Shows purpose, nature and extent of TSCA audit

TSCA Inspection Confidentiality Notice - Explains a facility's rights to claim that some or all of the information regarding toxic substance handling at the facility is to be considered as TSCA Confidential Business Information (CBI)

Before leaving the site, the following two forms must be completed, as appropriate.

Receipt for Samples and Documents - Itemizes all documents, photos and samples received by the investigator during the audit.

Declaration of CBI** - Itemizes the information that the facility claims to be TSCA CBI

Inspectional considerations related to the chemical control and hazard evaluation compliance are given in the following two subsections.

Chemical Control

Although the controlled substances most frequently encountered during multi-media investigations are polychlorinated biphenyls (PCBs), the investigator should determine if other regulated toxic substances are present at

* All personnel handling material claimed as Confidential Business Information under TSCA must be cleared for access to that material in accordance with Agency procedures. An annual update is required.

** These forms are generally completed during the closing conference. During the opening conference, facility personnel should be made aware that the latter form is used to itemize TSCA CBI material.

the facility. Currently these include metal working fluids (Part 747), fully halogenated chlorofluoroalkanes (40 CFR 762) and asbestos (40 CFR 763); additional toxic substances may be regulated in the future. Because the probability of finding PCBs and PCB items at a facility is greater than finding other TSCA-regulated substances, the following discussion is directed toward an evaluation of compliance with proper PCB and PCB item handling procedures. Should other TSCA-regulated substances be present, the investigator should consult the regulations for appropriate requirements.

Management of PCBs/PCB items is regulated under 40 CFR 761. In general, these regulations address recordkeeping, marking and labeling, audits, storage and disposal. The investigator is encouraged to use TSCA audit checklists, such as the ones provided in Appendix I.

Facilities which store and/or dispose of PCBs and PCB items often have EPA-issued Letters of Approval which contain facility operating and recordkeeping requirements in addition to those specified in 40 CFR 761. The investigator must obtain a copy of these approvals and any subsequent notifications to evaluate facility compliance.

In general, the compliance evaluation includes obtaining and reviewing information from Federal, State and local regulatory agency files; interviewing facility personnel regarding material handling activity; examining facility records and visually auditing material handling units.

Recordkeeping (40 CFR 761, Subpart J)

Every facility using or otherwise handling PCBs/PCB items is required to maintain specific records. Records regarding use, storage, transport and disposal must be reviewed for accuracy, completeness and compliance with applicable regulations. This includes a determination of the accuracy of the PCB inventory and annual document (40 CFR 761.180). An inventory checklist is provided in Appendix I. In general, the investigator should visually inspect all PCB items in service and in storage to verify completeness/accuracy of the records. Also, current records should be

compared with past records to ensure that all items have been adequately accounted for.

Marking/Labeling (40 CFR 761, Subpart C)

Observe PCB and PCB suspect units in service and in storage and determine if items are properly marked/labeled.

Audits (Items in Use or in Storage for Reuse) [40 CFR 761.30(a)(1)]

Review records to determine if items in use or stored for reuse have been inspected, as required. Determine whether all audit and maintenance records are being maintained, as required. Review these records to determine if problems identified during the internal audit are being addressed properly. PCB items should be inspected to verify that they are not leaking.

Servicing and Use of Various PCB Items (40 CFR 761.30)

Determine whether the facility is servicing PCB items or using PCBs for any of the following uses: heat transfer agent, hydraulic fluid, research purposes, in capacitors or in any other special authorized use category listed in 40 CFR 761.30. If PCBs are used in these services, determine if their use complies with the special requirements for each use category.

Storage for Disposal (40 CFR 761.65)

Identify all areas where PCBs/PCB items are stored for disposal. Determine the adequacy of these storage facilities, including proper marking, walls, roof, continuous floor with containment (ensure that containment is adequate) and location (above/below 100-year floodplain). Visually inspect all items in storage to determine if they are being stored properly (i.e., non-leaking, marked/labeled and dated with storage date). Review storage area records (including the required PCB annual document) for accuracy and adequacy. Determine whether or not the storage area is being properly inspected and that remedial action is being taken, as required.

If PCBs/PCB items are stored outside of the designated storage facilities (i.e., temporary storage), determine whether (1) items are leaking, (2) liquids stored in containers have greater than 500 ppm PCBs [liquids with PCB concentrations greater than 500 ppm cannot be stored in temporary areas (except for transformers)] and (3) items are properly marked and labeled and show dates removed from service and placed into storage (determine length of time items have been in temporary storage). If liquids with PCBs have been or are being stored in temporary storage, evaluate the required Spill Prevention Control and Countermeasure (SPCC) plan, as described in 40 CFR 112, for adequacy and accuracy. If the facility stores, in any permanent or temporary storage areas, liquid PCBs in any containers larger than those described in 40 CFR 761.65(c)(6), the facility SPCC plan must also be reviewed/evaluated.

As of October 1, 1985, installation of PCB transformers (which have been placed into storage for reuse or have been removed from another location) in or near commercial buildings, is prohibited.

Disposal

Incineration (40 CFR 761.70)

If the facility incinerates PCBs/PCB items, determine if the facility has applied for and received the required EPA approval. Determine if the facility meets required monitoring, control and recordkeeping requirements of the approval and of 40 CFR 761. Observe monitoring and control equipment and review the required records (including the PCB annual document) for adequacy and accuracy and to ensure that the incinerator meets the specified feed rate, combustion criteria and combustion efficiency. Evaluate the required annual document for completion and accuracy.

Landfilling (40 CFR 761.75)

If the facility landfills PCBs/PCB items, determine if the facility has applied for and received the required EPA and State approvals. Determine if the facility meets the specified siting, liner and geological

conditions. Determine if the landfill is in the 100-year floodplain. If so, inspect for proper water diversion structures. Evaluate general landfill operating conditions to determine if waste is being handled properly (as stated in the EPA Approval Letter and/or 40 CFR 761). This includes, but is not limited to, evaluation if (1) incompatibles are being land-filled with the PCBs/PCB items, (2) the facility is maintaining required records (including concentration of liquids disposed of and three-dimensional burial coordinates of waste), (3) site security is accurate, (4) liquids are solidified prior to disposal and (5) transformers and other PCB items are being properly prepared (drained/triple-rinsed, etc.) prior to disposal. Evaluate the required PCB annual document for adequacy and accuracy.

Determine if the facility is monitoring surface water, groundwater and leachates, as required by 40 CFR 761.75(b)(6). This includes identifying, locating and evaluating operation of groundwater monitoring wells, and reviewing groundwater sampling and analysis procedures and sample analysis results (for adequacy of monitoring frequency and proper chemical constituents). Determine, by audit and records review, if the facility has an operating leachate collection system. Review laboratory data on leachate characterization to determine if leachate is being adequately monitored and disposed of properly.

Hazard Evaluation

Establishment of compliance with the various hazard evaluation aspects of TSCA is best accomplished through review and evaluation of the record-keeping, reporting and submitted data required by the various regulatory components of Sections 5 and 8. In general, Section 5 addresses "new chemicals" (i.e., those not in commercial production when TSCA was passed in 1977) and Section 8 generally provides for control of "existing chemicals" (i.e., those chemicals that were in commercial production during 1977).

Much of the information to be obtained and reviewed under these two sections of TSCA will likely be, or have been, declared as TSCA Confidential Business Information (CBI) by company officials, and thus, requires special control procedures.

The glossary, [Appendix J, Table J-1] and 40 CFR Parts 703 to 723 should be consulted for an explanation of TSCA terms and definitions, respectively. The following listing summarizes the different compliance objectives of the key TSCA Section 5 and 8 components. Specific checklists for the important areas to review, evaluate and document for each pertinent section are given in Appendix J, Table J-2.

1. Premanufacture Notification (PMN)

- a. Verify that commercial manufacture or import did not begin prior to the 90-day review date and not more than 30 days before the Notice of Commencement (NOC) date. Verify that no NOC has been submitted if commercial manufacture or import has not begun.
- b. Verify the accuracy and documentation of the contents of the PMN itself.
- c. Verify that all commercially manufactured or imported chemicals are either on the TSCA 8(b) inventory, covered by an exemption or not subject to TSCA.

2. Research and Development (R&D) Exemption

- a. Verify that the recordkeeping and notification requirements are being met for all R&D chemicals.
- b. Verify that "Prudent Laboratory Practices" and hazardous data searches are adequately documented.

3. Test Marketing Exemption (TME)

- a. Verify that the conditions spelled out in the TME application are being met, particularly with respect to dates of production, quantity manufactured or imported, number of customers and use(s).

- b. Verify that the TME recordkeeping requirements are being met.

4. Low Volume Exemption (LVE) and Polymer Exemption (PE)

- a. Verify that specific contents of the exemption application are being met, and that all test data have been submitted.
- b. For an LVE, verify that the 1,000-Kg limit per 12-month period has not been exceeded. For a PE, assure that the chemical structure and monomer composition(s) are accurate.
- c. Verify that recordkeeping requirements for both LVEs and PEs are being met.

5. 5(e)/5(f) Order, Rule or Injunction

- a. Verify that all conditions of the order, rule or injunction are being followed, including use of protective equipment, glove testing, training and recordkeeping.
- b. If testing trigger is specified, verify production volume and status of testing activity.

6. Significant New Use Rule (SNUR)

- a. Verify that no commercial production has occurred prior to the 90-day review date.
- b. Verify that SNUR notices have been submitted for all applicable manufactured, imported or processed chemicals.
- c. Verify technical accuracy of SNUR submittal and completeness of required recordkeeping.

7. Bona Fide Submittals

Determine the commercial production (or import) status and R&D history of those *bona fide* chemicals not found on the confidential 8(b) inventory. Verify findings against applicable PMN, TME or other exemption.

8. Section 8(a) Level A PAIR (or CAIR) Report

- a. Determine if Preliminary Assessment Information Rule (PAIR) reports have been submitted for all 8(a) Level A listed chemicals manufactured or imported by the facility.
- b. Verify the accuracy of submitted PAIR information, particularly the reported figures for total production volume and worker exposure levels.

NOTE: The Comprehensive Assessment Information Rule (CAIR) will be addressed when this rule becomes final.

9. Section 8(b) Inventory Update Rule (INUR)

- a. Verify the accuracy of the information submitted in response to the INUR.
- b. Determine that required information was submitted by the prescribed deadline for all chemicals subject to INUR.

10. Section 8(c) Recordkeeping

- a. Determine if the facility has a Section 8(c) file and that allegations of significant health and environmental harm on record are properly filed and recorded.

- b. Determine that all applicable allegations have been recorded and filed.
- c. Determine if the facility has a written Section 8(c) policy and if the policy includes outreach to the employees.

11. Section 8(d) Reporting

Determine if copies (or lists) of all unpublished health effects studies have been submitted by manufacturers, importers and processors for any Section 8(d) listed chemical.

12. Section 8(e) Reporting

- a. Verify that all Section 8(e) substantial risk reports to the Agency were accurate and submitted within the required time frames.
- b. Verify that all substantial risk incidents and/or test results have been reported to EPA.
- c. Determine that the company has an adequate written policy addressing Section 8(e), and that it relieves employees of individual liability.

Pesticides

Pesticides are regulated by the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

The following list is for use in conjunction with the checklist in Appendix K and specific storage/use/disposal requirements found on pesticide labels. FIFRA requires a written notice of inspection and written receipt for samples and documents collected.

- Determine types and registration status of all pesticides produced, sold, stored and used at the facility, particularly if any are restricted or experimental use pesticides.
- Determine use(s) of each pesticide.
- Determine certification status of facility/handlers.
 - Verify who certifies facility/pesticide handlers (EPA, State, DOD).
 - Determine if commercial or private application.
 - If restricted-use pesticides are used, check if pesticide applicators are authorized to use these pesticides.
 - Check expiration dates on licenses/certificates.
- Review applicable records.
 - Check previous audit records and complaints.
 - Check application records.
 - Check restricted-use pesticide records (must be kept at least 2 years). Document suspect violations accordingly.
 - Check inventory records.
 - Check training records.
 - Check equipment repair records.
- Inspect storage, mixing/loading and container disposal areas.
 - Check bulk storage areas for compliance with Federal/State rules.
 - Check location, ventilation, segregation, shelter and house-keeping of pesticide storage/handling areas. Check security, fire protection and warning signs, as may be required by State regulations.
 - Check mixing equipment/procedures for reducing handlers' exposures to pesticides.
 - Check for safety equipment/procedures/use.
 - Check container cleanup and disposal procedures.

- Pesticide waste disposal
 - Check to see that pesticides are disposed of in accordance with applicable label and RCRA requirements.

Water Supply

Public drinking water supply systems (i.e., serve at least 25 people) are regulated by the Safe Drinking Water Act (SDWA).

The water supply checklist in Appendix L should be reviewed for those items of information necessary to determine monitoring requirements for water supply systems and whether or not the system can be reasonably expected to routinely provide safe potable water. Many facilities purchase their potable water supply from a nearby municipality. If no further treatment is provided (e.g., chlorination by the facility), the facility may not be directly covered by the SDWA. Nevertheless, the facility does have a responsibility to assure that their actions do not result in contamination of the municipal water supply (e.g., through cross-connection). The audit team should be alert to these possibilities.

There are five classes of injection wells defined in the Underground Injection Control program (40 CFR Part 146.5). Generally, they can be defined as:

- Class I - Industrial, Municipal or Hazardous waste disposal beneath the lowermost underground source of drinking water (USDW)
- Class II - Oil and gas related wells used for produced fluid disposal, enhanced recovery
- Class III - Mineral extraction wells
- Class IV - Hazardous or radioactive waste disposal above or into a USDW
- Class V - All other wells

The UIC Checklist in Appendix M should be used when inspecting a facility operating injection wells. The SDWA requires a written notice of inspection.

CLOSING CONFERENCE

A post-audit or wrap-up conference should be held with the facility. This should be limited to specific findings of the audit (e.g., factual observations and measurements). The audit team's main function is to observe and evaluate compliance. Any official notices of noncompliance, however, are provided by the Regional or State office upon final review of the report and other pertinent findings. Therefore, statements on compliance status, legal effects or enforcement consequences of noncompliance should not be discussed with the facility or its operating personnel. It is unacceptable to recommend a particular consulting firm, if asked, but it is proper to advise that professional societies be contacted.

During the closing conference, there can be a discussion of the audit team's preliminary findings. This discussion may include observed deviations from prescribed or recommended procedures. Facility officials should be informed of any leaks, spills or other problems that require immediate attention; however, no instructions or orders that repairs be undertaken should be issued. At this meeting, the investigators may request additional data, questions may be asked and answered, requested permit changes and process modifications are noted and necessary receipts are given. The investigators should make a final review of checklists and field notes before the conclusion of the visit. Field notes, taken by the investigators at the time of the field investigation, may not be turned over to the company officials under any circumstances.

For TSCA, FIFRA, RCRA and CERCLA activities, written receipts are given for samples and documents taken. A Declaration of Confidential Business Information (TSCA CBI) shall include a list of items declared confidential by an authorized facility official, and procedures should be explained if the company desires to make any subsequent declaration.

THE AUDIT REPORT AND FOLLOWUP

The audit report organizes and coordinates all evidence gathered during the audit in a usable manner. It is the compilation of factual information and professional judgment resulting from the compliance audit. Information in the report must be accurate, relevant, complete, objective and clear. The report serves to record the procedures used in gathering the data and gives factual observations and evaluations from the audit. It is the basis for any followup activities/enforcement that might occur.

Many different formats are possible for the audit report. A typical report could be structured in two main sections; the Executive Summary and the Technical Report. The Executive Summary establishes the objectives of the audit and presents succinct conclusions which are supported by relevant findings; recommendations are made if appropriate. Topics in the summary may include: (a) Overall environmental compliance, (b) adequacy of pollution control and treatment systems, (c) adequacy of operation and maintenance practices, (d) multi-media waste abatement needs and (e) followup action.

The Technical Report comprehensively describes the inspection by discussing such topics as facility history, investigation methods, sampling programs, and specific problem areas. The Technical Report correlates audit findings with the conclusions contained in the Executive Summary.

Where potentially criminal activities are discovered during the audit, the audit team and Regional office should promptly notify the Office of Criminal Investigations in Denver or the Regional/Special-Agent-in-Charge for a determination on whether a criminal investigation should be initiated. Administrative/civil enforcement (including informal negotiations with the company) should be held in abeyance, pending a decision on the appropriateness of a criminal referral or additional field investigation.

BIBLIOGRAPHY

1. EPA Order 1000.18, *Transportation of Hazardous Materials*, February 16, 1979. Washington, D.C., Environmental Protection Agency.
2. EPA Order 1440.2, *Health and Safety Requirements for Employees Engaged in Field Activities*, July 12, 1981. Washington, D.C., Environmental Protection Agency.
3. EPA Order 1440.3, *Respiratory Protection*, July 24, 1981. Washington, D.C., Environmental Protection Agency.
4. EPA Order 1440.4, *Health and Safety Training Requirements for Mine Safety*, August 17, 1982. Washington, D.C., Environmental Protection Agency.
5. EPA Order 1440.6, *Motor Vehicle Occupant Restraint Systems*, February 2, 1984. Washington, D.C., Environmental Protection Agency.
6. EPA Order 1440.7, *Hazard Communication*, May 30, 1986. Washington, D.C., Environmental Protection Agency.
7. EPA Order 3100.1, *Uniforms, Protective Clothing and Protective Equipment*, December 8, 1972. Washington, D.C., Environmental Protection Agency.
8. EPA Order 3100.3, *Authorization of Performance of Hazardous Duty*, October 31, 1977. Washington, D.C., Environmental Protection Agency.
9. G. William Frick, October 1981. *Conducting an Environmental Audit*, Washington, D.C., Van Ness, Feldman, Sutcliffe, Curtis and Levenberg.
10. Industrial Environmental Research Laboratory, August 1979. *A Handbook of Key Federal Regulations and Criteria for Multimedia Environmental Control. Interagency Energy/Environment R&D Program Report*, Research Triangle Park, North Carolina, Environmental Protection Agency, EPA-600/7-79-175.
11. National Enforcement Investigations Center, July 1981. *A Step-by-Step Approach to Development of NPDES and RCRA Permits*, Denver, Colorado, Environmental Protection Agency, EPA-330/1-81-004.
12. National Enforcement Investigations Center, August 1979. *Enforcement Considerations for Evaluation of Uncontrolled Hazardous Waste Disposal Sites by Contractors, Draft Report*, Denver, Colorado, Environmental Protection Agency.
13. National Enforcement Investigations Center, August 1979. *Performance Audit Inspections of Wastewater Sources*, Denver, Colorado, Environmental Protection Agency, EPA-300/1-79-004.

14. National Enforcement Investigations Center, March 1981. *NEIC Pesticide Sampling Guide*, EPA 330/9-81-001.
15. National Enforcement Investigations Center, (revised) May 1986. *NEIC Policies and Procedures Manual*. Denver, Colorado: Environmental Protection Agency, EPA-330/9-78-001-R.
16. National Enforcement Investigations Center, July 1981, *RCRA Inspection Manual*, Denver, Colorado, Environmental Protection Agency.
17. National Institute for Occupational Safety and Health (NIOSH), et al., October 1985, *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*. Washington, D.C., United States Government Printing Office.
18. Office of Administration, Occupational Health and Safety Staff, *Eye Protection Program Guideline*. Washington, D.C., Environmental Protection Agency.
19. Office of Administration, Occupational Health and Safety Staff, May 1987. *Interim Health and Safety Guidelines for EPA Asbestos Inspectors* (Revised). Washington, D.C., Environmental Protection Agency.
20. Office of Administration, Occupational Health and Safety Staff, March 18, 1986. EPA 1440, *Occupational Health and Safety Manual, 1986 Edition*. Washington, D.C., Environmental Protection Agency.
21. Office of Administration, Occupational Health and Safety Staff, *Eye Protection Program Guideline*. Washington, D.C., Environmental Protection Agency.
22. Office of General Enforcement, February 1979. *Enforcement Workshop on Plant Inspection and Evaluation - Volume II, Inspection Procedures and Performance Evaluation*, Washington, D.C., Environmental Protection Agency.
23. Office of General Enforcement, February 1979. *Enforcement Workshop on Plant Inspection and Evaluation - Volume III, Process and Control Equipment Flow Charting Techniques*, Washington, D.C., Environmental Protection Agency.
24. Office of General Enforcement, February 1979. *Inspection Procedures for Evaluation of Electrostatic Precipitator Control System Performance*, Washington, D.C., Environmental Protection Agency, EPA-304/1-79-007.
25. Office of Planning and Management, April 1973, *EPA Employee Responsibilities and Conduct*, Washington, D.C., Environmental Protection Agency.
26. Office of Water Enforcement, Enforcement Division, June 1984. *NPDES Compliance Inspection Manual*, Washington, D.C., Environmental Protection Agency.

27. Office of Water Enforcement, Enforcement Division, 1977. *NPDES Compliance Sampling Inspection Manual*, Washington, D.C., Environmental Protection Agency.
28. Oregon State Health Division, Department of Human Resources, *Small Public Water Supply Sanitary Survey Report*, 33-5 (revised January 1985).
29. PEDCO Environmental, Inc., 1980. *Standards of Performance for New Stationary Sources - A Compilation as of January 1, 1980*. Cincinnati, Ohio, Environmental Protection Agency, EPA-340/1-77-015, EPA-340/1-79-001, EPA-340/1-79-001a, EPA-340/1-80-001.
30. Pesticides and Toxic Substances Enforcement Division, January 1980. *Toxic Substances Control Act Inspection Manual, Volume One: TSCA Base Manual*, Washington, D.C., Environmental Protection Agency.
31. Pesticides and Toxic Substances Enforcement Division, March 1981, *Toxic Substances Control Act Inspection Manual, Volume Two: PCB Inspection Manual*, Washington, D.C., Environmental Protection Agency.
32. A.D. Schwope, et al., March 1985, *Guidelines for the Selection of Chemical Protective Clothing, 2nd Edition*. Cambridge, MA, Arthur D. Little, Inc.
33. Technology Transfer, 1978. *Handbook, Industrial Guide for Air Pollution Control*, Environmental Protection Agency, EPA-625/6-78-004.
34. Thomas H. Truitt, et al., 1971. *Environmental Audit Handbook - Basic Principles of Environmental Compliance Auditing*, Washington, D.C., Wald, Harkrader & Ross and Resource Planning Corp.

ACRONYMS

AQCR - Air Quality Control Region

BAT - Best Available Technology

BATEA - Best Available Technology Economically Achievable

BCT - Best Conventional Pollution Control Technology

BMP - Best Management Practices

BOD - Biochemical Oxygen Demand

BPT - Best Practicable Control Technology Currently Available

Btu - British thermal units

CAA - Clean Air Act

CBI - Confidential Business Information

CEM - Continuous Emission Monitoring

CERCLA - Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund)

CFR - Code of Federal Regulations

COD - Chemical Oxygen Demand

CWA - Clean Water Act [aka: Federal Water Pollution Control Act (FWPCA)]

DCO - Document Control Officer

DO - Dissolved Oxygen

DOT - Department of Transportation (Federal)

EPA - Environmental Protection Agency (Federal)

ESP - Electrostatic Precipitators

FIFRA - Federal Insecticide, Fungicide and Rodenticide Act

FIP - Final Implementation Plan

F/M - Food to Microorganism Ratio

HSWA - Hazardous Solid Waste Amendments

HW-FW - Half Wave/Full Wave (electrical distribution)

INVR - Inventory Update Rule

ITC - Interagency Testing Committee

LAER - Lowest Achievable Emission Rate

MLVSS - Mixed Liquor Volatile Suspended Solids

N/A - Not Applicable

NAA - Non-Attainment Areas

NAAQS - National Ambient Air Quality Standards

NEIC - National Enforcement Investigations Center

NESHAP - National Emission Standards for Hazardous Air Pollutants

NOC - Notice of Commencement

NPDES - National Pollutant Discharge Elimination System

NSPS - New Source Performance Standards

OECM - Office of Enforcement and Compliance Monitoring

O&M - Operation and Maintenance

ORM - Other Regulated Material

OSHA - Occupational Safety and Health Act

PAIR - Preliminary Assessment Information Rule

PCB - Polychlorinated Biphenyls

PMN - Premanufacture Notice

POTW - Publicly-Owned Treatment Works

PSD - Prevention of Significant Deterioration

QA/QC - Quality Assurance/Quality Control

RA - Regional Administrator

RCRA - Resource Conservation and Recovery Act (enacted as amendment to the Solid Waste Disposal Act)

R&D - Research and Development

SARA - Superfund Amendments and Reauthorization Act

SDWA - Safe Drinking Water Act (enacted as amendment to the Public Health Service Act)

SIP - State Implementation Plan

SNUR - Significant New Use Rule

SPCC - Spill, Prevention, Containment and Countermeasures

SPDES - State Pollutant Discharge Elimination System

SSE - Stationary Source Enforcement

TME - Test Marketing Exemption

TOC - Total Organic Carbon

T-R - Transformer-Rectifier

TSCA - Toxic Substances Control Act

TSD - Treatment, Storage and Disposal

TSDF - Treatment, Storage and Disposal Facilities (hazardous waste)

TSS - Total Suspended Solids

UIC - Underground Injection Control

U.S.C. - United States Code

USDW - Underground Source of Drinking Water

VEO - Visible Emissions Observation

WLA/TMDL - Wasteload Allocation/Total Maximum Daily Load

APPENDICES

- A SUMMARY OF POLLUTION CONTROL LEGISLATION
- B SAFETY PLAN
- C EVIDENTIARY PROCEDURES FOR PHOTOGRAPHS/MICROFILM
- D AIR POLLUTION CHECKLISTS
- E WATER POLLUTION CHECKLISTS
- F RCRA CHECKLISTS
- G CERCLA CHECKLIST
- H TSCA CONFIDENTIAL BUSINESS INFORMATION PROCEDURES AND FORMS
- I TSCA PCB CHECKLIST
- J TSCA SECTIONS 5 AND 8 CHECKLIST
- K PESTICIDE CHECKLIST
- L WATER SUPPLY CHECKLIST
- M UNDERGROUND INJECTION CONTROL (UIC) CHECKLIST

APPENDIX A
SUMMARY OF POLLUTION CONTROL LEGISLATION

Appendix A

SUMMARY OF POLLUTION CONTROL LEGISLATION

This appendix is a synopsis of the Federal approach to environmental regulation, EPA enforcement remedies and a summary of each of the major pollution control acts: the Clean Air Act (CAA), the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA/Superfund), the Toxic Substances Control Act (TSCA), the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), and the Safe Drinking Water Act (SDWA). Because these laws and the regulations promulgated thereunder typically are very complex and continually are being modified, the investigator should carefully review the specific provisions which apply to the operations of the facility before conducting an inspection.

GENERAL FEDERAL APPROACH TO ENVIRONMENTAL REGULATION

National standards are established to control the handling, emission, discharge and disposal of harmful substances. Waste sources must comply with these national standards whether the programs are implemented directly by the EPA or delegated to the States. In many cases, the national standards are applied to sources through permit programs which control the release of pollutants into the environment. The EPA establishes the Federal standards and requirements and approves State programs for permit issuance.

The States can set stricter standards than those required by Federal law. Some of the larger programs which have been delegated by the EPA to qualifying States are the National Emissions Standards for Hazardous Air Pollutants (NESHAP), the Prevention of Significant Deterioration (PSD) permits under the CAA, the Water Quality Standards and the National Pollution Discharge Elimination System (NPDES) programs under the CWA, the Hazardous Waste Program under RCRA, and the Drinking Water and Underground Injection Control (UIC) programs under the SDWA. Conversely, TSCA is administered entirely by the Federal government.

EPA ENFORCEMENT OPTIONS

1. Issuance of an Administrative Compliance Order, sometimes preceded by a Notice of Violation*. A Compliance Order will specify the nature of the violation and give a reasonable time for compliance. The order, if violated, can lead to enforcement action pursuant to the civil and/or criminal process of environmental laws.
2. Issuance of an administrative complaint for civil penalties. Parties named in such complaints must be given notice and an opportunity for a hearing on the alleged violations before a penalty can be assessed by EPA.
3. Under certain statutes (e.g., SDWA) EPA may take whatever action is necessary to protect the public health, in emergency situations, without first obtaining a judicial order.
4. EPA generally may go directly to Federal court seeking injunctive relief or a civil penalty without using administrative procedures. EPA also may obtain an emergency restraining order halting activity alleged to cause "an imminent and substantial endangerment" or "imminent hazard" to the health of persons.
5. EPA may go directly to Federal court seeking criminal sanctions without using administrative procedures. Criminal penalties are available for "knowing" or for "willful" violations.

In addition, EPA can also "blacklist" a company or party that fails to comply with the CAA or CWA by preventing it from entering into Federal contracts, loans and grants. In cases where the party had been convicted of certain criminal offenses under the CAA or CWA, Federal agencies are expressly prohibited from entering into contracts, etc., with that entity.

* A concise written statement with factual basis for alleging a violation and a specific reference to each regulation, act, provision or permit term allegedly violated

CLEAN AIR ACT

The Clean Air Act (CAA) calls for the EPA to establish national ambient air standards. These standards are expressed as concentrations of designated hazardous pollutants called National Ambient Air Quality Standards (NAAQS). These standards are to be achieved by the States through State Implementation Plans (SIPs). EPA also sets the following national air emission standards: New Source Performance Standards (NSPS), National Emissions Standards for Hazardous Air Pollutants (NESHAP) and standards governing mobile sources of air pollution (including motor vehicle fuels). Moreover, special programs have been developed for prevention of significant deterioration (PSD) in clean air areas and for stringent controls in non-attainment areas (NAAs).

The SIP provides emission limitations, schedules and timetables for compliance by stationary sources, as well as transportation control plans for mobile sources. The act focuses upon "major" stationary sources or major modifications of existing sources. Major sources are defined as sources which generally emit more than 100 tons/year of a designated pollutant.

National Ambient Air Quality Standards/State Implementation Plans

EPA designates harmful pollutants and publishes criteria documents which discuss potential harmful effects of those pollutants. The Agency then sets primary and secondary ambient air standards (CAA, Section 109). Primary standards are intended to protect the health of the population, whereas, secondary standards are meant to protect the esthetic values of the environment.

Seven pollutants have been established as harmful and standards established. These pollutants include: sulfur dioxides, particulates, carbon monoxide, ozone, hydrocarbons, nitrogen oxides and lead. These standards are implemented through SIPs (CAA, Section 110).

EPA has designated 247 Air Quality Control Regions (AQCRs). These have been rated as either "clean" or "non-attainment" for each of the criteria pollutants. SIPs must assure attainment of NAAQS by prescribed dates. SIPs must meet Federal requirements, but each State may choose its own mix of emissions for stationary and mobile sources to meet the NAAQS. Control procedures may include stationary source emission limits, transportation plans, preconstruction review of new sources, NAA and PSD permits for construction of new sources, monitoring and inspection and testing of vehicles. Other measures may include emissions charges, closing and relocation of plants, changes in operations and ways to reduce vehicular traffic including taxes, staggered work hours and mass transportation. The CAA prescribes that no SIP will be adopted without a public hearing, and sources affected by the SIP are expected to participate.

New Source Performance Standards

NSPS are established for specific pollutants in industrial categories, based upon adequately demonstrated control technology. Many States have been delegated the authority to enforce NSPS. When a State does not have the authority, EPA enforces NSPS in that state. Waivers from NSPS for up to 7 years may be obtained, the purpose of which is to encourage use of innovative technological systems (CAA, Section 111).

National Emissions Standards for Hazardous Air Pollutants

Section 112 of the CAA defines hazardous air pollutants as those for which no air quality standard is applicable but which are judged to increase mortality or serious irreversible or incapacitating illness. NESHAP standards are based on health effects with strong reliance on technological capabilities. They apply to both existing and new stationary sources. The five substances on the NESHAP list for which there are effective regulations currently are: benzene, beryllium, asbestos, mercury and vinyl chloride. The NESHAP program can be delegated to any qualifying State (CAA, Section 112).

Prevention of Significant Deterioration

The purpose of PSD is to avoid significant future degradation of the nation's clean air areas. A clean air area is one where the air quality is better than the ambient primary or secondary standard. Designation is pollutant specific so that an area can be non-attainment for one pollutant but clean for another. PSD applies only to new and modified sources in clean air areas. Clean air areas are divided into three categories: Class I - only minor air quality degradation allowed; Class II - moderate degradation; and Class III - substantial degradation. In no case would PSD allow air quality to deteriorate below secondary air quality standards.

"Baseline" is the existing air quality for the area at the time the first PSD is applied for. "Increments" are the maximum amount of deterioration that can occur in a clean air area over baseline. Increments in Class I areas are smaller than for Class II and Class II increments are smaller than Class III areas. For purposes of PSD, a major emitting source is one of 26 designated categories which emits or has the potential to emit 100 tons/year of the designated air pollutant. A source that is not within the 26 designated categories is a major source if it emits more than 250 tons/year.

New sources are required to obtain permits before construction. The permit describes the level of control to be applied and what portion of the increment may be made available to that source by the State (CAA, Part C).

Non-Attainment Areas (NAA)

Non-attainment/areas are those which are not in compliance with national air quality standards. New construction in an NAA is prohibited unless the SIP has been amended and approved by EPA to reflect the following conditions:

1. Total allowable emissions for the area will be less than emissions from existing sources.

2. The new source must comply with the lowest achievable emission rate (LAER).
3. All other sources within the State owned by the subject Company are in compliance.
4. The SIP is being carried out for the area.

The applying source in an NAA must, therefore, obtain a greater than 1:1 reduction of the pollutant or pollutants for which the area has been designated non-attainment. The source must undergo a relatively stringent pre-construction review.

Emission offsets from existing sources may need to be obtained, especially if the new source will have emissions that would exceed the allowance for the NAA. In these situations, the source would need to obtain enforceable agreements from other sources in the NAA or from its own plants in the NAA.

Emission reductions can also be "banked" by an existing source to permit future new source growth. Banked offsets may be sold or traded to other sources.

Emission Standards for Mobile Sources/Fuel Standards

Section 202 of the CAA directs EPA to regulate air pollutants emitted by motor vehicles which "cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." In response, the Agency has set standards governing motor vehicle emissions of carbon monoxide, hydrocarbons, oxides of nitrogen and particulates. These standards have given rise to the emission control systems that first appeared in automobiles in the early 1970s. The CAA generally prohibits the removal (or rendering inoperative) of any emission control device that was installed by the vehicle manufacturer in order to meet the applicable emission standards. Most states have enacted similar laws enforcing this prohibition and/or have incorporated such prohibitions as part of SIP.

The CAA provides EPA with the authority to control or prohibit the use of fuels which pose a public health risk or which "impair to a significant degree the performance of any emission control device or system." The Agency's regulations are based upon both of these rationales. (The best example of this are the regulations governing the lead content of gasoline.) Enforcement of the fuel standards is achieved through a combination of Federal and State efforts, and is based, in part, upon SIP provisions and/or State laws.

CLEAN WATER ACT (FEDERAL WATER POLLUTION CONTROL ACT)

Through the 1950s and 1960s, emphasis was on the States setting ambient water quality standards and developing plans to achieve these standards. In 1972, the Federal Water Pollution Control Act was significantly amended. These changes emphasized a new approach, combining water quality standards and effluent limitations (i.e., technology-based standards). The amendments called for compliance by all point-source discharges with the technology-based standards. A strong Federal enforcement program was created and substantial monies were made available for construction of sewage treatment plants. The Federal Water Pollution Control Act was amended in 1977 to address toxic water pollutants and in 1987 to refine and strengthen priorities under the Act as well as enhance EPA's enforcement authority. Since the 1977 amendments, the Federal Water Pollution Control Act has been commonly referred to as the Clean Water Act (CWA).

State Water Quality Standards and Water Quality Management Plans

Section 303 of the CWA authorizes the States to establish ambient water quality standards and water quality management plans. If national technology standards are not sufficient to attain desired stream water quality, the State shall set maximum daily allowable pollutant loads (including toxic pollutants) for these waters and, accordingly, determine effluent limits and compliance schedules for point sources to meet the maximum daily allowable loads.

The National Pollutant Discharge Elimination (NPDES) Program

This program was established by Section 402 of the CWA and, under it, EPA and approved States have issued more than 50,000 NPDES permits. Permits are required for all point sources from which pollutants are discharged to navigable waters. An NPDES permit is required for any direct discharge from new or existing sources. Indirect discharges through POTWs are regulated under a separate program (see discussion of pretreatment standards below). In 1979 and 1980, the permit program was revised and one of the new features was the use of Best Management Practices (BMPs) on a case-by-case basis to minimize the introduction of toxic and hazardous substances into surface waters. BMPs are industry practices used to reduce secondary pollution (e.g., raw material storage piles shall be covered and protected against rain and runoff). BMPs do not have numerical limits and, therefore, are different from effluent limits.

Section 304 of the CWA sets restrictions on the amount of pollutants discharged at industrial plant outfalls. Amounts are usually expressed as weight per unit of product (i.e., 0.5 lb/1,000 lb product manufactured). The standards are different for each industry. Effluent guidelines are applied to individual plants through the NPDES permit program.

There are three levels of technology for existing industrial sources: Best Practicable Control Technology (BPT), Best Conventional Technology (BCT) and Best Available Technology Economically Achievable (BAT). Under the 1972 Act, BPT was intended to be put in place by industry in 1977 and BAT in 1983. These timetables have been modified by subsequent amendments.

The 1987 CWA Amendments modified the compliance deadlines for the following:

- BPT limits requiring a substantially greater level of control based on a fundamentally different control technology
- BAT for priority toxic pollutants

- BAT for other toxic pollutants
- BAT for nonconventional pollutants
- BCT for conventional pollutants

For each technology the new deadline requires compliance "as expeditiously as practicable, but in no case later than 3 years after the date such limitations are promulgated. . .and in no case later than March 31, 1989."

New Source Performance Standards (NSPS) are closely related to BAT for existing sources but are not quite the same. NSPS are different for each industrial category. These standards must be achieved when the new industrial source begins to discharge. NSPS permits will be effective for a period of 10 years vs. 5 years or less for the BPT and BAT-type permits. This 10-year protection insulates against change in BCT or BAT requirements but does not hold against Section 307(a) toxic pollutant standards or against "surrogate" pollutants that are used to control hazardous or toxic pollutants.

A permit application must be made. Adequate information must be submitted including basic facility descriptions, SIC codes, regulated activities, lists of current environmental permits, descriptions of all outfalls, drawings, flows, treatment, production, compliance schedules, effluent characteristics, use of toxics, potential discharges and bio-assay toxicity tests performed.

Applicants must conduct analytical testing for pollutants for BOD, COD, TOC, TSS, ammonia, temperature and pH. The applicant, if included within any of the 34 "primary industry" categories, must sample for all toxic metals, cyanide and phenols given in EPA Application Form 2C and for specified organic toxic pollutant fractions.

The applicant must list hazardous substances believed to be present at the industrial plant. Testing is not required but analytical results must be provided, if available.

NPDES Permit

The NPDES permit, issued by EPA or the State, enforces Federal effluent limitations promulgated for individual industrial categories; NSPS; toxic effluent standards; State water quality standards under Section 303 of the CWA, if any are applicable and hazardous substances otherwise regulated under Section 311 of the CWA that may be incorporated under the NPDES permit instead. Permit elements include the amount of pollutants to be discharged expressed in terms of average monthly and maximum daily loads; compliance schedules, if applicable standards cannot be met now and monitoring, testing and reporting requirements.

Routine Non-compliance Reports - The Discharge Monitoring Form

The Discharge Monitoring Report (DMR) gives a summary of the discharger's records on a monthly or quarterly basis for flow measurement, sample collection and laboratory analyses. Noncompliance reports must be submitted quarterly on the cause of noncomplying discharges, period of non-compliance, expected return to compliance and plans to minimize or eliminate recurrence of incident.

Emergency Reporting

- Health: The EPA shall be notified within 24 hours of noncompliance involving discharge of toxic pollutants, threat to drinking water or injury to human health.
- Bypass: Noncompliance due to intentional diversion of waste shall be reported promptly to the permitting agency and may be permissible if essential to prevent loss of life or serious property damage.
- Upset: Temporary noncompliance due to factors beyond the reasonable control of the permittee shall be promptly reported to the agency.

The 1987 CWA Amendments establish a schedule for the regulation of municipal and industrial stormwater discharges under NPDES permits. Initially, (before October 1, 1992), only major dischargers and those who are significant contributors of pollutants will be required to obtain permits.

Pretreatment Standards for Indirect Discharges to Publicly-Owned Treatment Works

Coverage

New and existing industrial users who discharge to POTWs are subject to general and categorical pretreatment standards. The categorical standards are primarily directed to control of toxic pollutants in specific industries.

Requirements

- General Pretreatment Standards

Prohibit fire or explosion hazards, corrosivity, solid or viscous obstructions, "slug" discharges, and heat sufficient to inhibit biological activity at POTWs

- Categorical Standards

- Standards to be expressed as concentration limits or mass weight per unit of production.
- Source must be in compliance 3 years after promulgation of standards.
- Variances can be obtained for fundamentally different factors or if industrial pollutants are consistently being removed by POTW.

- Reports

Users must provide appropriate agency (EPA, State or POTWs having approved pretreatment programs) with basic information, SIC code, average and maximum daily discharge, characteristics or pollutants, applicable standards and certification whether standards are being met and, if not, what pretreatment is necessary and a compliance schedule.

- Monitoring, Sampling and Analysis

Users shall submit sampling data for each regulated pollutant in discharge.

- Progress Reports

Reports and information shall be submitted at 6-month intervals.

Non-point Source Pollution Control

Section 208 of the CWA provides for control of non-point source pollution and directs States to establish planning bodies to formulate area-wide pollution control plans. NPDES permits cannot be issued where the permit may conflict with an approved Section 208 plan.

The 1987 CWA Amendments require States or EPA to develop nonpoint source management programs under Section 319.

Dredge or Fill Discharge Permit Program

Section 404 of the CWA regulates the discharge of dredged or fill material into waters of the United States. Dredged material is excavated or dredged from a water body. Fill material is that material used to replace water with dry land. The Section 404 permit program is administered by the

U.S. Army Corps of Engineers. EPA provides guidelines for the issuance of permits by the Corps of Engineers. States may assume responsibility for portions of the program.

Discharge of Oil and Hazardous Substances

Section 311 of the CWA prohibits discharges of oil or hazardous substances in quantities that may be harmful to waters of the United States. The appropriate Federal agency must be immediately notified of any spill of a "reportable quantity." Section 311 provides for cleanup of spills and requires plans for preparation of Spill Prevention, Control and Countermeasures (SPCC) plans.

Over 300 substances have been defined as hazardous under Section 311 and each of these substances has a "reportable quantity" (40 CFR, Parts 116 and 117, 1980).

A person or corporation who properly notifies the Agency of the discharge of a reportable quantity of oil or hazardous substance is immune from criminal prosecution but is liable for civil penalties. Additionally, those who cause the spill are liable for the costs of cleanup and removal. If the Federal government must clean up the spill, the discharger of the spill is liable for cleanup costs. There are maximum liability limits, depending upon the type of facility and spill. These limits do not apply if the discharge resulted from willful negligence or willful misconduct of the owner.

Certain discharges of oil and hazardous material that flow from a point source may be excluded from Section 311 liability if, during preparation of the NPDES permit covering that facility, conditions are added to the permit to avoid the occurrence of a spill.

RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 (RCRA)*

RCRA was signed on October 21, 1976 and subsequently amended in 1980 and 1984. The 1984 amendments to RCRA brought about dramatic changes in the coverage required by the Act. The first in a series of regulations restricting the land disposal of hazardous wastes have been promulgated. Regulations also have been proposed which will include expanded coverage in such areas as waste oil, underground tanks, etc. The Act primarily deals with current and future waste handling activities; however, one section of the act (Section 7003), addresses problems which may have arisen prior to 1976. The 7003 provision allows EPA to take action against persons conducting past and current activities that may present "an imminent or substantial endangerment to health or to the environment." The 1984 amendments also provide for corrective actions against contamination resulting from past releases of hazardous waste even without an imminent hazard. A review of the Act and the implementing regulations by the inspector is imperative before conducting an inspection, due to these changes.

Solid wastes, if land disposed, are regulated through State programs under Subtitle D of RCRA. Hazardous solid wastes are subject to regulation in their generation, transport, treatment, storage and disposal under Subtitle C of RCRA. Subtitle C of the statute authorizes a comprehensive Federal program to regulate hazardous wastes from generation to ultimate disposal. A waste is hazardous under Subtitle C if it is listed by EPA as hazardous, if it exhibits hazardous characteristics (corrosivity, reactivity, ignitability and extraction procedure toxicity) and if not delisted or excluded from regulation. There are special management provisions for hazardous wastes created by small quantity generators and hazardous wastes that are intended to be reused or recycled.

Solid waste includes garbage, refuse and sludge, other solid, liquid, semi-solid or contained gaseous material which is discarded, has served its

* 43 U.S.C. §§6901 et seq. and Solid Waste Disposal Act amendments of 1980, P.L. 96-482, 94 Stat. 2334.

intended purpose or is a mining or manufacturing byproduct. Most industrial and commercial byproducts can qualify as a solid waste. Exclusions from solid waste include domestic sewage, irrigation return flows, materials defined by the Atomic Energy Act, *in situ* mining waste and NPDES point sources.

Solid wastes excluded from regulation as hazardous solid wastes are household waste; crop or animal waste; mining overburden and wastes from processing and beneficiation of ores and minerals; flyash, bottom ash waste, slag waste and flue gas emission control waste and drilling fluids from energy development. A waste can be "delisted" from the hazardous waste listing or excluded for other reasons. Some materials intended to be reused or recycled are not fully regulated as solid/hazardous wastes, while others, depending upon the type of waste generated and the recycling process used, are fully regulated.

Statutory Restrictions/Prohibitions

- November 8, 1984 - The placement of any bulk liquid hazardous waste in salt domes, salt bed formations, underground mines or caves is prohibited until the facility receives a permit.
- May 8, 1985 - The landfilling of bulk or noncontainerized liquid hazardous waste or free liquids contained in hazardous waste is prohibited.
- November 8, 1985 - The placement of any nonhazardous waste liquid in a landfill operating under interim status or a permit, is prohibited unless the only reasonable alternative is a landfill or unlined surface impoundment which will not endanger groundwater drinking sources. See Section 3004(b)(3) for full graphics.
- November 8, 1986 - The land disposal of solvents (codes F001 through F005) and dioxins (codes F020 through F023) is prohibited unless human health and the environment will not be endangered. (Wastes generated by Superfund and RCRA enforcement actions are

not affected until November 8, 1988.) See final rule, 51 Federal Register 40572 (November 7, 1986), to be codified at 40 CFR Part 268, with conforming amendments at 40 CFR Parts 260, 261, 262, 264, 265, 270 and 271.

- July 8, 1987 - Land disposal of wastes listed in Section 3004(d)(2) (the "California list") is prohibited unless human health or the environment is not endangered (Wastes generated by Superfund and RCRA enforcement actions not affected until November 8, 1988.) See proposed rule, 57 Federal Register 44714 (December 11, 1986).
- May 8, 1985 - New units, lateral expansions and replacement of existing units at interim status waste piles are to have single liners and leachate collection systems.

New units, lateral expansions and replacement of existing units at interim status landfills and surface impoundments are to have double liners and leachate collection systems.

- August 8, 1988 - Deep well injection of certain wastes is prohibited unless deemed safe by EPA. See Section 3004(d)(2) and (e)(2) for list of wastes.

List of Hazardous Wastes

Hazardous waste streams from specific major industry groups and some generic sources (40 CFR, Part 261, Subpart D, §261.31 and 261.32) and well over 200 toxic commercial chemical wastes (i.e., discarded commercial chemical products and chemical intermediates) are included on the list of hazardous wastes (40 CFR §261.33). If a commercial chemical substance is on the list, its off-spec species is also considered hazardous when discarded, as are spill residues. Some of the listed wastes are acutely toxic and are more closely regulated than other hazardous wastes. See e.g., 40 CFR §§261.33(e), 261.5(e) and 261.7(b)(3).

Special Management Provisions

- Small Quantity Generators

Small quantity generators are those that generate less than 1,000 kg per month of hazardous waste. There are two classes of small quantity generators:

1. Generators of between 100 and 1,000 kg per month that are subject to most of the requirements of 40 CFR Part 262 which apply to fully regulated generators, except that they are allowed to accumulate up to 6,000 kg of hazardous waste and to store waste for up to 180 to 270 days.
2. Generators of less than 100 kg per month that are exempt from regulation under 40 CFR Part 262 so long as they do not accumulate greater than 1,000 kg of hazardous waste, properly identify their wastes and comply with the less stringent waste treatment, storage and/or disposal requirements of 40 CFR §261.5.

Note that the classification of the generator is a function of the total wastes generated, not each waste stream. In addition, for acutely toxic wastes, if more than 1 kg per month of waste or 100 kg per month of spill residues are generated, all quantities of that waste are fully regulated.

- Recycling or Reuse

The type of waste generated and/or the recycling process employed will determine whether recycled/reused materials are a solid/hazardous waste. Some of these materials are not considered solid wastes, some are solid wastes but not hazardous wastes, while others are hazardous but are not subject to full regulation, and still other of these materials are both solid and hazardous wastes

that are fully regulated. The circumstances surrounding the apparent recycling/reuse of waste materials should be thoroughly documented during and inspection.

Requirements for Generators*

- Identification - Hazardous wastes must be identified by list, testing or experience and assigned waste identification numbers.
- Notification - No later than 90 days after a hazardous waste is identified or listed in 40 CFR, Part 261, a notification is to be filed with EPA or an authorized State. An EPA identification number must be received.
- Manifest System - Implement the manifest system and follow procedures for tracking and reporting shipments. Beginning September 1, 1985, a waste minimization statement is to be signed by the generator [see RCRA Section 3002(b)].
- Packing - Implement packaging, labeling, marking and placarding requirements prescribed by DOT regulations (40 CFR, Parts 172, 173, 178 and 179).
- Annual Report - Submittal required March 1 using EPA Form 8700-13.
- Exception Reports - When generator does not receive signed copy of manifest from designated TSDF within 45 days, the generator sends Exception Report to EPA including copy of manifest and letter describing efforts made to locate waste and findings.
- Accumulation - When waste is accumulated for less than 90 days, generator shall comply with special requirements including contingency plan, prevention plan and staff training (40 CFR, Part 265, Subparts C, D, J and 265.16).

* 40 CFR Part 262

- Permit for Storage More Than 90 Days - If hazardous wastes are retained onsite more than 90 days, generator is subject to all requirements applicable to TSDFs and must obtain a RCRA permit.

Requirements for Transporters*

- Notification - No later than 90 days after a hazardous waste is identified or listed in 40 CFR, Part 261, a notification is to be filed with EPA or an authorized State. Receive EPA identification number.
- Manifest System - The transporter must fully implement the manifest system. The transporter signs and dates manifest, returns one copy to generator, assures that manifest accompanies waste, obtains date and signature of TSDF or next receiver and retains one copy of the manifest for himself.
- Delivery to TSDF - The waste is delivered only to designated TSDF or alternate.
- Record Retention - Transporter retains copies of manifest signed by generator, himself and accepting TSDF or receiver and keeps these records for a minimum of 3 years.
- Discharges - If discharges occur, notice shall be given to National Response Center. Appropriate immediate action shall be taken to protect health and the environment and a written report shall be made to the DOT.

* 40 CFR Part 263

Requirements for Treatment, Storage or Disposal Facilities (TSDFs)*

- Notification - No later than 90 days after a hazardous waste is identified or listed in 40 CFR, Part 261, a notification is to be filed with EPA or an authorized State.
- Interim Status - These facilities include TSDFs; onsite hazardous waste disposal; onsite storage for more than 90 days; in transit storage for greater than 10 days and the storage of hazardous sludges, listed wastes, or mixtures containing listed wastes intended for reuse. Interim status is achieved by:
 - Notification (see above)
 - Being in existence on November 19, 1980 or on the date of statutory or regulatory changes which require the facility to have a permit
 - Filing a Part A by the date specified in the regulation covering the facility (40 CFR, Parts 261, 264 or 265)
- Interim Status Facility Standards - The following standards and requirements shall be met.
 - General information (Subpart B)
 - Waste analysis plan
 - Security
 - Inspection plan
 - Personnel training
 - Handling requirements
 - Preparedness and prevention
 - Contingency planning and emergency procedures (Subparts C and D)
 - Records and reports
 - Manifest system
 - Operating logs
 - Annual and other reports (Subpart E)

* 40 CFR Parts 264 and 265

- Groundwater Monitoring (Subpart F)
 - Closure and post-closure plans (Subpart G)
 - Financial requirements (Subpart H)
 - Containers, tanks, surface impoundments, piles (Subparts I, J, K, L)
 - Land treatment, landfills, incinerators, thermal treatment, chemical, physical and biological treatment (Subparts M, N, O, P, Q)
 - Underground injection (Subpart R)
- Permit - In order to obtain a permit:
 - Facilities with interim status must file a Part B RCRA permit application when directed to do so by EPA or an authorized State and final facility standards must be met or the facility must be on an approved schedule to meet those standards.

The EPA-authorized States are to issue permits or deny the application by November 8, 1988 for land disposal facilities; by November 8, 1989 for incinerators; and by November 8, 1992 for other facilities. The following is a statutory schedule for termination of interim status.

Facility	Interim Status Terminates	Unless Part B Submitted
Land Disposal	November 1985	November 1985
Incinerators	November 1989	November 1986
Other facilities	November 1992	November 1988

- New facilities and facilities which do not qualify for interim status are to receive a RCRA permit before construction can begin or a hazardous waste can be handled.
- Used/Recycled Oil - Used oil burned for energy recovery is regulated under 50 CFR Part 266. Although a number of parallel

off-spec due to flashpoint, metal or halogen content. Additional regulations governing used/recycled oil are being developed.

- Underground Storage Tanks - The 1984 amendments also will cause certain underground storage tanks to be regulated. By May 8, 1986, all owners of underground tanks are to notify the designated State or local agency of the existence of the tank and specify the following:

- Age
- Size
- Type
- Location
- Uses

For tanks taken out of operation after January 1, 1974, the owner is to also notify the designated State or local agency of the existence of the tank and specify the following:

- Date the tank was taken out of operation
- Age at that time
- Size
- Type
- Location
- Type and quantity of substance left in the tank

Rules comprehensively regulating these tanks were proposed April 17, 1987, 52 Federal Register 12662.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (SUPERFUND)

The Superfund Act was enacted December 11, 1980. The Federal government is authorized to clean up toxic or hazardous contaminants at closed and abandoned hazardous waste dumps and the government is permitted to

recover cost of this cleanup and associated damages by suing the responsible parties involved. Cleanup monies will come out of a "superfund" created by taxes on chemicals and hazardous wastes.

The act provides that, when there is a release of hazardous substance, either real or threatened, the parties who operated the vessel or facility which created the release are liable for the containment, removal, remedial action, response and injury damages to natural resources under Section 107(a). The act also establishes limitations on liability.

If claims are presented to the liable parties but are not satisfied, the act then allows claims to be reimbursed from the Superfund.

Regulatory provisions under Sections 102 and 103 of the act require that release of hazardous substances into the environment be reported unless the release is in accordance with an established permit. Spills of any "reportable quantity", established pursuant to regulations promulgated under the Act, must be reported.

All owners or operators of any facility handling and disposing of hazardous substances or that has handled hazardous substances in the past (including previous owners and operators) were required to inform the EPA Administrator by June 1981 of their facility activities unless they have a RCRA permit or have been accorded "interim status". Failure of notification is a crime and, if the party knowingly fails to provide these data, they are not entitled to the prescribed limits and defenses of liability.

On October 17, 1986, the Superfund Act was amended under the Superfund Amendments and Reauthorization Act (SARA). Those amendments provide mandatory schedules for the completion of various phases of remedial response activities, establish detailed cleanup standards and generally strengthen existing authority to effect the cleanup of superfund sites.

[An integral part of SARA, but not an amendment to the Superfund Act, is the Emergency Planning and Community Right-to-Know Act of 1986. It addresses the handling of extremely hazardous chemicals and requires:

(1) Emergency planning, (2) emergency notification, (3) community right-to-know reporting and (4) an emissions inventory.]

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA regulates existing and new chemical substances. TSCA applies primarily to manufacturers, distributors, processors and importers of chemicals. TSCA can be divided into five parts as follows:

Inventory and Pre-manufacture Notification

EPA has published an inventory of existing chemicals. A substance that is not on this list is considered "new" and requires Pre-manufacture Notification (PMN) to EPA at least 90 days before the chemical can be manufactured, shipped or sold (TSCA, Section 5). If the EPA does not make a declaration within 90 days to restrict the product, then full marketing can begin and the chemical is added to the inventory. In addition, a manufacturer may obtain a test marketing exemption and distribute the chemical before the 90-day period has expired. Conversely, EPA, in response, may reject PMN for insufficient data, negotiate for suitable data, prohibit manufacture or distribution until risk data are available or pending development of a Section 6 rule, completely ban the product from the market or review the product data for an additional 90 days.

Testing

Under TSCA, Section 4, EPA can require product testing of any substance which "may present an unreasonable risk of injury to health or to the environment." Some testing standards are proposed, but no test requirements for specific chemicals are yet in effect.

Reporting and Recordkeeping

TSCA, Section 8(a) deals with general reporting. The "first tier" rule (PAIR) now in effect is a short form seeking production and exposure

data on over 2,300 existing chemicals. A "second tier" rule is expected to obtain more detailed data on a relatively small group of chemicals that may become priority candidates for regulation.

Section 8(c) calls for records of significant adverse effects of toxic substances on human health and the environment. It requires that records of alleged adverse reaction be kept for a minimum of 5 years.

Section 8(d) allows EPA to require that manufacturers, processors and distributors of certain listed chemicals (designated under 40 CFR 716.13) submit to the EPA lists of health and safety studies conducted by, known to or ascertainable by them. Studies include individual files, medical records, daily monitoring reports, etc.

Section 8(e) requires action upon discovery of certain data. Any person who manufactures, processes or distributes a chemical substance or mixture, or who obtains data which reasonably supports the conclusion that their chemical presents a substantial risk of injury to health or to the environment, is required to notify EPA immediately. Personal liability can only be limited if the Company has a response plan in effect.

Regulation Under Section 6

EPA can impose a Section 6 rule if there is reason to believe that the manufacture, processing, distribution or use or disposal of a chemical substance or mixture causes, or may cause, an unreasonable risk of injury to health or to the environment. Regulatory action can range from labeling requirements to complete prohibition of the product. Section 6 rules are currently in effect for several chemicals including PCBs. A Section 6 rule requires informal rulemaking, a hearing, and a cost-benefit analysis.

Imminent Hazard

This is defined as a chemical substance or mixture causing an imminent and unreasonable risk of serious or widespread injury to health or the

environment. When such a condition prevails, EPA is authorized by TSCA, Section 7, to bring action in U.S. District Court. Remedies include seizure of the chemical or other relief including notice of risk to the affected population or recall, replacement or repurchase of the substance.

FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT (FIFRA)

A pesticide is defined as any substance intended to prevent, destroy, repel or mitigate pests. FIFRA requires registration of all pesticides, restricts use of certain pesticides, authorizes experimental use permits and recommends standards for pesticide applicators and the disposal and transportation of pesticides.

Pesticides are registered for 5 years and classified for either general or restricted usage. Restricted means that they are to be applied either by or under the direct supervision of a certified applicator. Pesticides must be labeled and specify ingredients, uses, warnings, registration number and any special use restrictions. Regulations also specify tolerance levels for certain pesticide chemicals in or on agricultural commodities. These limits apply to 310 different compounds and residue tolerances range from 0 to 100 ppm. A few pesticides are also regulated as toxic pollutants under Section 307(a) of the CWA and by Primary Drinking Water Standards under the SDWA.

SAFE DRINKING WATER ACT

The SDWA of 1974 was established to provide safe drinking water to the public. Both primary and secondary drinking water standards have been set by EPA regulations which apply to water after treatment by public drinking water systems. National Interim Primary Drinking Water Regulations were adopted in 1975 to protect public health (40 CFR, Part 141). Regulations covering radionuclides were added in 1976. Regulations for trihalomethanes were promulgated in 1979. Secondary regulations were established in 1979 as guidelines to States to protect the non-health-related qualities of drinking water. The 1986 amendments to the SDWA: (1) establish a

mandatory schedule, requiring the promulgation of primary drinking water regulations for 83 contaminants, (2) prohibit the use of lead in public water systems, (3) provide civil and criminal penalties for persons who tamper with public water systems and (4) require closer scrutiny of State programs, including the direct enforcement of drinking water standards, if necessary.

The SDWA also provides for protection of underground sources of drinking water. Final regulations have been issued whereby States are to establish Underground Injection Control (UIC) waste disposal programs to ensure that contaminants in water supplies do not exceed National Drinking Water Standards and to prevent endangerment of any underground source of drinking water. Injection wells are divided into five classes for regulatory handling. Construction and disposal standards are established for the permitting of Class I to III wells. Class I and Class IV wells are subject to RCRA requirements. Class IV wells are those used by generators of hazardous or radioactive wastes to dispose of hazardous wastes into formations within one-quarter-mile of an underground source of drinking water. New Class IV wells are prohibited and existing Class IV wells must be phased out within 6 months after approval or promulgation of a UIC program in the state. There are numerous State regulatory requirements affecting groundwater which should be consulted by multi-media compliance inspectors. In addition, the 1986 amendments to SDWA strengthen EPA's enforcement authority for UIC programs.

APPENDIX B
SAFETY PLAN

Appendix B
NEIC - SAFETY PLAN

Project _____	No. _____
Approval OHS Designee _____	Date _____
Project Coordinator _____	Date _____
Branch Chief _____	Date _____
On Scene Coordinator _____	Date _____
Activities _____	

(Note: If sampling is involved, the primary objective is to minimize the risk of personnel exposure to hazardous materials.)

Hazards Anticipated*

Toxic Vapors: Yes _____ No _____

If yes, list 1. _____ 2. _____
 3. _____ 4. _____
 5. _____

TLV 1. _____ 2. _____
 3. _____ 4. _____
 5. _____

Explosivity: Yes _____ No _____

Radioactivity: Yes _____ No _____

O₂ Depletion: Yes _____ No _____

Buried Utilities: Yes _____ No _____

If yes, specify: _____

 * If unknown, mark UK.

Appendix B (cont.)

Level of Protection Recommended

Level A _____

Type SCBA _____

Level B _____

Type Cartridge _____

Level C _____

Level D _____

Enhancement _____

Contractor Equipment Required _____

Contractor Personnel

Number and Skills _____

Medical Monitoring Yes _____ No _____

Respirator/SCBA Qualified (if required for activity)

Yes _____ No _____

Site Monitoring Procedures (Equipment to be used)

Decontamination/Disposal Procedures

Appendix B (cont.)

Comments _____

Emergency Contacts*

Project No. _____

Medical:

Location _____
Phone No. _____ (Hospital)
Phone No. _____ (EMT)

Fire:

Phone No. _____

Police:

Phone No. _____

* Post at site.

APPENDIX C
EVIDENTIARY PROCEDURES FOR PHOTOGRAPHS/MICROFILM

Appendix C

PHOTOGRAPHS

When movies, slides or photographs are taken which visually show the effluent or emission source and/or any monitoring locations, they are numbered to correspond to logbook entries. The name of the photographer, date, time, site location and site description are entered sequentially in the logbook as photos are taken. A series entry may be used for rapid sequence photographs. The photographer is not required to record the aperture settings and shutter speeds for photographs taken within the normal automatic exposure range. Special lenses, films, filters or other image enhancement techniques must be noted in the logbook. Chain-of-custody procedures depend upon the subject matter, type of film and the processing it requires. Film used for aerial photography, confidential information or criminal investigations require chain-of-custody procedures. Adequate logbook notations and receipts may be used to account for routine film processing. Once developed, the slides or photographic prints shall be serially numbered corresponding to the logbook descriptions and labeled.

MICROFILM

Microfilm is often used to copy documents that are or may later become TSCA Confidential Business Information (CBI). This microfilm must be handled in accordance with the TSCA CBI procedures (see Appendix I for additional information and forms). Table C-1 is the NEIC procedure for processing microfilm containing TSCA CBI documents.

Table C-1

NEIC PROCEDURE FOR MICROFILM
PROCESSING OF TSCA CBI DOCUMENTS

1. Kodak Infocapture AHU 1454 microfilm shall be used for filming all TSCA CBI documents.
2. Obtain packaging materials and instructions from the NEIC Document Control Officer or Assistant, including:
 - Preprinted shipping labels
 - Chain-of-custody records
 - Custody seals
 - Double envelopes
 - Green TSCA cover sheets
 - TSCA loan receipt
3. Prepare each roll of microfilm for shipment to the processor.
 - Enclose the film in double-wrapped packages
 - Place a green TSCA cover sheet in the inner package
 - Place a TSCA loan receipt in the inner package
 - Complete a Chain-of-Custody Record, place the white copy in the inner package and keep the pink copy for the field files
 - Seal inner package with a custody seal and sign and date it
 - Mark the inner package:

"TO BE OPENED BY ADDRESSEE ONLY
TSCA CONFIDENTIAL BUSINESS INFORMATION"

4. Ship the film via Federal Express to the Springfield, Virginia Federal Express office and instruct that it is to be held for pickup. USE SIGNATURE SECURITY SERVICE ONLY.

This practice requires the courier to sign, the station personnel to sign and the delivery courier to sign.

Instruct the Springfield Federal Express office to hold the shipment for pickup and to notify:

Mr. Vern Webb
U.S. EPA/EPIC
Vint Hill Farms Station
Warrenton, Virginia 22186
(730) 557-3110

5. Telephone Mr. Webb and inform him of the date shipped, the number of rolls of film, the air bill number and your phone number.
6. Telephone the NEIC Document Control Officer or Assistant and inform them.
7. Telephone Mr. Webb the following day and verify film quality to determine if repeat microfilming is necessary.
8. The pink copy of the Federal Express form, with the shipment cost and project number indicated, must be turned in to the Assistant Director, Planning and Management. If you are in the field for an extended period of time (3 weeks or more), the pink copies must be mailed to NEIC.

APPENDIX D
AIR POLLUTION CHECKLISTS

Appendix D
NEW SOURCE PERFORMANCE STANDARDS (NSPS)*

Sources Covered

NSPS includes new and modified industrial stationary source categories for which construction was started after the standard was proposed. The categories are listed in Table D-1.

Requirements

- Notification to Agency

Agency notified before construction ☐ Yes ☐ No
 before startup ☐ Yes ☐ No
 before testing ☐ Yes ☐ No

- Emissions Testing

Performance tests of emission control equipment	<u> </u>	Yes	<u> </u>	No
conducted using prescribed reference methods	<u> </u>	Yes	<u> </u>	No
within 180 days of startup	<u> </u>	Yes	<u> </u>	No
written results sent to Agency	<u> </u>	Yes	<u> </u>	No

- Monitoring

Continuous emission monitoring (CEM) to be conducted for 10 categories [Table D-2]

CEM recordkeeping kept in permanent form suitable for inspection	Yes	No

- | | | | |
|---|---|-----|----|
| - | Records of continuous monitoring system maintained, including actual data | Yes | No |
| | performance specification test reports | Yes | No |
| | calibration checks | Yes | No |
| | adjustments and maintenance | Yes | No |

Control equipment operating parameters (flow rates, pressure drops, currents, etc.)	Yes	No

- Reports/Records

Excess reports filed	Yes	No
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11	1	1
12	1	1
13	1	1
14	1	1
15	1	1
16	1	1
17	1	1
18	1	1
19	1	1
20	1	1
21	1	1
22	1	1
23	1	1
24	1	1
25	1	1
26	1	1
27	1	1
28	1	1
29	1	1
30	1	1
31	1	1
32	1	1
33	1	1
34	1	1
35	1	1
36	1	1
37	1	1
38	1	1
39	1	1
40	1	1
41	1	1
42	1	1
43	1	1
44	1	1
45	1	1
46	1	1
47	1	1
48	1	1
49	1	1
50	1	1
51	1	1
52	1	1
53	1	1
54	1	1
55	1	1
56	1	1
57	1	1
58	1	1
59	1	1
60	1	1
61	1	1
62	1	1
63	1	1
64	1	1
65	1	1
66	1	1
67	1	1
68	1	1
69	1	1
70	1	1
71	1	1
72	1	1
73	1	1
74	1	1
75	1	1
76	1	1
77	1	1
78	1	1
79	1	1
80	1	1
81	1	1
82	1	1
83	1	1
84	1	1
85	1	1
86	1	1
87	1	1
88	1	1
89	1	1
90	1	1
91	1	1
92	1	1
93	1	1
94	1	1
95	1	1
96	1	1
97	1	1
98	1	1
99	1	1
100	1	1

[illegible]

Notification given to State/local agency	Yes	No	
--	-----	----	--

* 40 CFR, Part 60, 1980

Table D-1
SOURCES SUBPART (40 CFR Part 60)
EFFECTIVE DATE OF STANDARD AND POLLUTANTS SUBJECT TO NSPS

Source	Subpart	Effective Date	Pollutant
Fossil-fuel-fired steam generators	D	August 17, 1971	Particulate matter, sulfur dioxide, nitrogen oxides
Municipal incinerators	Da	September 18, 1978	Particulate matter
Portland cement plants	E	August 17, 1971	Particulate matter
Nitric acid plants	F	August 17, 1971	Particulate matter
Sulfuric acid plants	G	August 17, 1971	Nitrogen oxides
Asphalt concrete plants	H	August 17, 1971	Sulfur dioxide, acid mist (sulfuric acid)
Petroleum refineries	I	June 11, 1973	Particulate matter
	J	June 11, 1973	Particulate matter, carbon monoxide, sulfur dioxide
Storage vessels for petroleum liquids	K	June 11, 1973	VOC
	Ka	May 18, 1978	
Secondary lead smelters	L	June 11, 1973	Particulate matter
Secondary brass and bronze ingot production plants	M	June 11, 1973	Particulate matter
Iron and steel plants (basic oxygen furnace)	N	June 11, 1973	Particulate matter
Sewage treatment plants (incinerators)	O	June 11, 1973	Particulate matter
Primary copper smelters	P	October 16, 1974	Particulate matter, sulfur dioxide
Primary zinc smelters	Q	October 16, 1974	Particulate matter, sulfur dioxide
Primary lead smelters	R	October 16, 1974	Particulate matter, sulfur dioxide
Primary aluminum reduction plants	S	October 23, 1974	Fluorides
Phosphate fertilizer industry (listed as five separate categories)	T U V W X	October 22, 1974	Fluorides
Coal preparation plants	Y	October 24, 1974	Particulate matter
Ferro-alloy production facilities	Z	October 21, 1974	Particulate matter, carbon monoxide
Steel plants (electric arc furnaces)	AA	October 21, 1974	Particulate matter
Kraft pulp mills	BB	September 24, 1976	Particulate matter, TRS
Glass plants	CC	June 15, 1979	Particulate matter
Grain elevators	DD	August 3, 1978	Particulate matter
Metal furniture surface coating	EE	November 28, 1980	VOC
Stationary gas turbines	EE	September 24, 1976	Nitrogen oxides, sulfur dioxide
Lime plants	HH	May 3, 1977	Particulate matter
Lead acid battery plants	KK	January 14, 1980	Lead
Metallic mineral processing plants	LL	August 24, 1982	Particulate matter
Auto and light-duty truck, surface coating operation	MM	October 5, 1979	VOC
Phosphate rock plants	NN	September 21, 1979	Particulate matter
Ammonium sulfate plants	PP	February 4, 1980	Particulate matter
Graphic arts industry	QQ	October 28, 1980	VOC
Pressure sensitive tape manufacturing	RR	December 30, 1980	VOC
Appliance surface coating	SS	December 24, 1980	VOC
Metal coil surface coating	TT	January 5, 1981	VOC
Asphalt roofing plants	UU	November 18, 1980; May 26, 1981	Particulate matter
Synthetic organic chemicals	VV	January 5, 1981	Performance standards
Beverage can surface coating	WW	November 26, 1980	VOC
Bulk gasoline terminal	XX	December 17, 1980	VOC
Vinyl/urethane coating	FFF	January 18, 1983	VOC
Petroleum refineries	GGG	January 4, 1983	Performance standards
Synthetic fiber plants	HHH	November 23, 1982	VOC
Petroleum dry cleaners	JJJ	September 21, 1984	VOC
Onshore natural gas processing plants	KKK	June 24, 1985	VOC
Onshore natural gas processing plants	LLL	October 1985	SO ₂
Nonmetallic mineral processing plants	OOO	August 1, 1985	Particulate matter
Wool fiberglass insulation manufacturing plants	PPP	February 25, 1985	Particulate matter

Table D-2
NSPS SOURCES REQUIRING CEM

Source	Subpart	Effective Date	Monitor
Fossil-fuel-fired steam generator	D	08/17/71	opacity, SO ₂ , NO _x , O ₂ or CO ₂
Fossil-fuel-fired electric utilities	Da	09/18/78	opacity, SO ₂ , NO _x , O ₂ or CO ₂
Nitric acid plants	G	08/17/71	NO _x
Sulfuric acid plants	H	08/17/71	SO ₂
Petroleum refineries (FBCCU)	J	06/11/73	opacity, CO, SO ₂ , H ₂ S
Claus sulfur recovery unit	J	10/4/76	opacity, CO, SO ₂ , H ₂ S
Primary copper smelters	P	10/16/74	opacity, SO ₂
Primary zinc smelters	Q	10/16/74	opacity, SO ₂
Primary lead smelters	R	10/16/74	opacity, SO ₂
Ferroalloy production facilities	Z	10/21/74	opacity
Electric arc furnaces	AA	10/21/74	opacity
Kraft pulp mills	BB	09/24/76	opacity, TRS
Lime manufacturing plants	HH	05/03/77	opacity
Phosphate rock plants	NN	09/21/79	opacity
Flexible vinyl and urethane coating and printing	FFF	01/18/83	VOC
Onshore natural gas processing plants	LLL	10/01/85	SO ₂ /T/TRS

Appendix D (cont.)

Date and time when CEM was inoperative,
nature of repairs

☐ Yes ☐ No

Notification given to State/local agency.

☐ Yes ☐ No

NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)*

Sources Covered

NESHAP includes new and existing stationary sources that emit or have the potential to emit any one of six hazardous air pollutants. The pollutants and sources covered are listed in Table D-3.

Existing sources must comply within 90 days but can obtain waivers for up to 2 years for installation of controls. New sources or modified sources coming online after the publication of standards must achieve immediate compliance.

Requirements

• Compliance Status

Submit to Agency within 90 days of publication of standard adequate information on design, method of operation, weight/month of hazardous material and control devices

___ Yes ___ No

• Agency Notification

Proper notice before startup and before emissions testing

___ Yes ___ No

• Emissions Testing

Emission testing conducted using prescribed reference methods

___ Yes ___ No

Written results sent to Agency

___ Yes ___ No

• Monitoring and Reporting

Required monitoring being performed

___ Yes ___ No

Reporting to Agency

___ Yes ___ No

* 40 CFR, Part 61, 1980

Table D-3
SOURCES SUBJECT TO TITLE 40 CFR PART 61
NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Pollutant	Subpart	Source
Asbestos	M	Asbestos mills Manufacturing Demolition and renovation Spraying Fabrication Waste disposal
Beryllium	C	Extraction plants Ceramic plants Foundries Incinerators Machine shops
Beryllium	D	Rocket motor firing
Mercury	E	Ore processing plants Chlor-alkali plants Sludge incinerators Sludge drying plants
Vinyl chloride	F	Ethylene dichloride plants Vinyl chloride plants Polyvinyl chloride plants
Benzene (leaks)	J	Equipment in benzene service (plants designed to produce more than 1,000 megagrams of benzene per year)
Volatile Hazardous Air Pollutant (VHAP)	V	Equipment in VHAP service
Radon-222	B	Underground uranium mines
Radionuclides	H	DOE facilities
Radionuclides	I	Facilities licensed by the Nuclear Regulatory Commis- sion and Federal facilities not covered by Subpart H
Radionuclides	K	Elemental phosphours plants

Table D-4
EXAMPLE OF INSPECTION CHECKLIST*

I. GENERAL INFORMATION

- A. Plant Location (mail address) _____
- B. Chief Corporate Officer (name/phone) _____
- C. Plant Manager (name/phone) _____
- D. Environmental Contact (name/phone) _____
- E. Sources Inspected _____ Production Status _____

- F. Reasons for Inspection (check appropriate items)
 Routine Inspection _____ Compliance Progress _____
 Complaint Investigation _____ Permit Review/Renewal _____
 Stack Testing Observed _____ Tax Certification _____
 Special Studies _____ Emergency Episode _____
 Other _____ Equipment Malfunction _____
- G. Plant Representative Contacted (name and title) _____

- H. Inspection Procedures and Conditions
 Prior Notice (check one) Yes _____ No _____
 Time/Date _____ Duration Onsite _____
 Type Inspection (check one) Counterflow _____ Followup _____
 Other _____
 Weather _____ Wind Direction _____

II. PRE-INSPECTION INTERVIEW

- A. Production Status: Normal _____ Abnormal _____
- B. Control Equipment: Normal _____ Abnormal _____
- C. Permit/Compliance Schedule Changes Needed: Yes _____ No _____
- D. Comments _____

* Revised from Enforcement Workshop on Plant Inspection and Evaluation, Volume II, Draft, EPA, OE, SSE, February 1979

Table D-4 (cont.)

III. INSPECTION RESULTS

A. Preliminary Conclusions

All sources in compliance with:

Mass Emission Regulations	Yes	_____	No	_____	N/A	_____
Visible Emission Regulations	Yes	_____	No	_____	N/A	_____
Fuel Quality Regulations	Yes	_____	No	_____	N/A	_____
Continuous Monitoring Regulations	Yes	_____	No	_____	N/A	_____
Sampling/Testing Requirements	Yes	_____	No	_____	N/A	_____
Recordkeeping Requirements	Yes	_____	No	_____	N/A	_____
Special Orders	Yes	_____	No	_____	N/A	_____

O&M Practices	Good	_____	Average	_____	Poor	_____
---------------	------	-------	---------	-------	------	-------

Housekeeping	Good	_____	Average	_____	Poor	_____
--------------	------	-------	---------	-------	------	-------

B. Specific Conclusions

Compliance questionable due to:

Changes in raw materials and/or fuels _____

Production rate increases _____

Operational changes in process _____

Deterioration of process equipment _____

Operational Problems in Control Equipment (check appropriate items below)

<u>Electrostatic Precipitators</u>	<u>Fabric Filters</u>	<u>Wet Scrubbers</u>
Resistivity _____	Tears/pinholes _____	Low Liquor Flow _____
TR Sets _____	Blinding _____	Gas Flow Rate Low _____
Insulators _____	Bleeding _____	Bed Plugging _____
Discharge Wires _____	Cleaning System _____	Nozzle Erosion _____
High Velocity _____	Hopper Overflow _____	Demisters _____
Gas Distribution _____	Corrosion _____	Throat Adjustment _____
Rappers _____	Tray Collapse _____	
Solids Handling _____	Corrosion _____	
Plate Warpage _____		
Mass Overload _____		
Other _____		

Table D-4 (cont.)

C. Samples Taken (Describe) _____

D. Comments/Recommended Action _____

Inspector _____ Date _____

Table D-5
EXAMPLE OF ASBESTOS EMISSION INSPECTION CHECKLIST

I. GENERAL INFORMATION

- A. Facility Location (mail address) _____
- B. Chief Corporate Officer (name/phone) _____
- C. Facility Manager (name/phone) _____
- D. Environmental Contact (name/phone) _____
- E. Sources Inspected _____ Production Status _____

- F. Reasons for Inspection (check appropriate items)
 Routine Inspection _____ Compliance Progress _____
 Complaint Investigation _____ Permit Review/Renewal _____
 Stack Testing Observed _____ Tax Certification _____
 Special Studies _____ Emergency Episode _____
 Other _____ Equipment Malfunction _____
- G. Plant Representative Contacted (name and title) _____

- H. Inspection Procedures and Conditions
 Prior Notice (check one) Yes _____ No _____
 Time/Date _____ Duration Onsite _____
 Type Inspection (check one) Counterflow _____ Followup _____
 Other _____
 Weather _____ Wind Direction _____

II. ASBESTOS MILL

- Does the facility discharge to the outside air? _____ Yes _____ No
- Are controls in place prior to discharge that meet
air cleaning requirements? _____ Yes _____ No
- (If yes, complete air cleaning standards XII.)

Table D-5 (cont.)

III. ROADWAYS

Is roadway surfaced with asbestos tallings or asbestos-contained waste material? ☐ Yes ☐ No

(Surfacing of temporary roadway in area of asbestos ore desposits is allowed.)

IV. MANUFACTURING (See 61.144(a) for applicability)

Are visible emissions possible to the outside air? ☐ Yes ☐ No

Are controls in place prior to discharge? ☐ Yes ☐ No

(If yes, complete air cleaning standards XII.)

V. DEMOLITION AND RENOVATION

A. If the facility is to be demolished, is the amount of friable asbestos at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other components? ☐ Yes ☐ No

(If no, go to B below.)

1. Was a written notice provided to the Administrator? ☐ Yes ☐ No

2. Was the notice postmarked or delivered at least 10 days before demolition/renovation began? ☐ Yes ☐ No

3. Did the notice include:

a. Name and Address of owner or operator? ☐ Yes ☐ No

b. A description of the facility to be demolished or renovated including size, age and prior use? ☐ Yes ☐ No

c. The estimated amount of friable asbestos? ☐ Yes ☐ No

d. The location of the facility to be demolished/renovated? ☐ Yes ☐ No

e. A demolition/renovation schedule? ☐ Yes ☐ No

f. The methods of demolition/renovation to be used? ☐ Yes ☐ No

g. Procedures to be followed to comply with National Emission Standards for Asbestos, 40 CFR 61, Subpart M? ☐ Yes ☐ No

Table D-5 (cont.)

- h. The name and location of the asbestos disposal site? ☐ Yes ☐ No
4. Was friable asbestos material removed prior to wrecking or dismantling? ☐ Yes ☐ No
- If no, was material encased in concrete or similar material? ☐ Yes ☐ No
- Was material adequately wetted? ☐ Yes ☐ No
5. When asbestos covered or coated, were facility components removed? ☐ Yes ☐ No
- a. Were they adequately wetted? ☐ Yes ☐ No
- b. Were they carefully lowered to ground level? ☐ Yes ☐ No
6. If asbestos was stripped from facility components, were they adequately wetted? ☐ Yes ☐ No
- If equipment would be damaged by wetting during renovation
- a. Was Administrator supplied with sufficient information to determine that wetting would cause unavoidable damage? ☐ Yes ☐ No
- b. Was a local exhaust ventilation and collection system used? ☐ Yes ☐ No
- i. Are visible emissions possible to the outside air? ☐ Yes ☐ No
- ii. Was the system operated according to air cleaning requirements? ☐ Yes ☐ No
- (If a system was used, complete air cleaning standards XII and continue.)
7. After components were removed as units or sections,
- a. Were they adequately wetted during stripping? ☐ Yes ☐ No
- b. Was a local exhaust ventilation and collection system used? ☐ Yes ☐ No
- (1) Are visible emissions possible to the outside air? ☐ Yes ☐ No

Table D-5 (cont.)

(2) Was the system operated to air cleaning requirements? ☐ Yes ☐ No

(If a system was used complete air cleaning standards XIII and continue.)

8. When friable material was stripped or removed,

a. Had it been adequately wetted until collected for disposal? ☐ Yes ☐ No

b. Had it been lowered, not dropped to the ground or lower floor? ☐ Yes ☐ No

c. Had it been transported via dust-tight shutes or containers if more than 50 feet above the ground level? ☐ Yes ☐ No

9. Was the temperature at the point of wetting below 0 °C (32 °F)? ☐ Yes ☐ No

(If yes, no other wetting requirements apply and components are to be removed as units or in sections to the maximum extent possible.)

B. If the facility is to be demolished,

Is the amount of friable asbestos less than 80 linear meters (260 linear feet) or pipes and less than 15 square meters (160 square feet) on other components? ☐ Yes ☐ No

(If no, go to C below.)

1. Was a written notice provided to the Administrator? ☐ Yes ☐ No

2. Was the notice postmarked or delivered at least 20 days before demolition/renovation began? ☐ Yes ☐ No

3. Did the notice include:

a. Name and address of owner or operator? ☐ Yes ☐ No

b. A description of the facility to be demolished or renovated including size, age and prior use? ☐ Yes ☐ No

c. The estimated amount of friable asbestos? ☐ Yes ☐ No

Table D-5 (cont.)

- | | | | |
|--|--|------------------------------|-----------------------------|
| d. | The location of the facility to be demolished/renovated? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| e. | A demolition/renovation schedule? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| C. Has the demolition been ordered by State or local government due to structurally unsound conditions or danger of imminent collapse? | | | |
| | | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| If no, go to D below. | | | |
| 1. | Was a written notice provided to the Administrator? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. | Was the notice postmarked or delivered as early as possible before the demolition began? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. | Did the notice include | | |
| a. | Name and address of owner or operator | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. | A description of the facility to be demolished or renovated including size, age and prior use | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c. | The estimated amount of friable asbestos | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d. | The location of the facility to be demolished/renovated | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| e. | A demolition/renovation schedule | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| f. | The methods of demolition/renovation to be used | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| g. | Procedures to be followed to comply with national Emission Standard for Asbestos, 40 CFR 61, Subpart M | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| h. | The name and location of the asbestos disposal site | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. | After components were removed as units or sections, | | |
| a. | Were they adequately wetted during stripping? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. | Was a local exhaust ventilation and collection system used? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | (1) Are visible emissions possible to the outside air? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | (2) Was the system operated according to air cleaning requirements? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Table D-5 (cont.)

(If a system was used, complete air cleaning standards XIII and continue.)

5. When friable material was stopped or removed,
- a. Had it been adequately wetted until collected for disposal? ☐ Yes ☐ No
 - b. Had it been lowered, not dropped, to the ground or lower floor? ☐ Yes ☐ No
 - c. Had it been transported via dust-tight shutes or containers if more than 50 feet above the ground level? ☐ Yes ☐ No
6. Was the temperature at the point of wetting below (0 °C (32 °F)? ☐ Yes ☐ No

(If yes, no other wetting requirements apply and components are to be removed as units or in sections to the maximum extent possible.)

- D. If the facility is to be renovated, is the amount of friable asbestos to be stripped at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other components? ☐ Yes ☐ No
- 1. Was a written notice provided to the Administrator? ☐ Yes ☐ No
 - 2. Was the notice postmarked or delivered at least 10 days before demolition/renovation began? ☐ Yes ☐ No
 - 3. Did the notice include
 - a. Name and address of owner or operator? ☐ Yes ☐ No
 - b. A description of the facility to be demolished or renovated including size, age and prior use? ☐ Yes ☐ No
 - c. The estimated amount of friable asbestos? ☐ Yes ☐ No
 - d. The location of the facility to be demolished/renovated? ☐ Yes ☐ No
 - e. A demolition/renovation schedule? ☐ Yes ☐ No
 - f. The methods of demolition/renovation to be used? ☐ Yes ☐ No
 - g. Procedures to be followed to comply with National Emission Standards for Asbestos, 40 CFR 61, Subpart M? ☐ Yes ☐ No

Table D-5 (cont.)

- h. The name and location of the asbestos disposal site? ☐ Yes ☐ No
4. Was friable asbestos material removed prior to wrecking or dismantling? ☐ Yes ☐ No
- If no, was material encased in concrete or similar material and was material adequately wetted? ☐ Yes ☐ No
5. When asbestos covered or coated were facility components removed?
- a. Were they adequately wetted? ☐ Yes ☐ No
- b. Were they carefully lowered to ground level? ☐ Yes ☐ No
6. If asbestos was stripped from facility components, were they adequately wetted? ☐ Yes ☐ No
- If equipment would be damaged by wetting during renovation,
- a. Was Administrator supplied with sufficient information to determine that wetting would cause unavoidable damage? ☐ Yes ☐ No
- b. Was a local exhaust ventilation and collection system used? ☐ Yes ☐ No
- (1) Are visible emissions possible to the outside air? ☐ Yes ☐ No
- (2) Was the system operated according to air cleaning requirements? ☐ Yes ☐ No
- (If a system was used, complete air cleaning standard XIII and continue.)
7. After components were removed as units or sections,
- a. Were they adequately wetted during stripping? ☐ Yes ☐ No
- b. Was a local exhaust ventilation and collection system used? ☐ Yes ☐ No
- (If a system was used complete air cleaning standards XIII and continue.)
8. When friable material was stripped or removed,

Table D-5 (cont.)

- | | | | |
|----|--|------------------------------|-----------------------------|
| a. | Had it been adequately wetted until collected for disposal? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. | Had it been lowered, not dropped, to the ground or lower floor? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c. | Had it been transported via dust-tight shutes or containers if more than 50 feet above the ground level? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 9. | Was the temperature at the point of wetting below 0 °C (32 °F)? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
- (If yes, no other wetting requirements apply and components are to be removed as units or in sections to the maximum extent possible.)

VI. SPRAYING

If sprayed on asbestos material is encapsulated and the material is not friable after drying, go to 3.

- | | | | |
|----|---|------------------------------|-----------------------------|
| A. | Does material that is sprayed contain: | | |
| | 1% or less asbestos on a dry weight basis? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| B. | If greater than 1%, | | |
| 1. | Was the Administrator notified at least 20 days prior to the spraying? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. | Did the notice include: | | |
| | a. Name and address of owner or operator? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | b. Location of spraying operation? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | c. Procedures to be followed to comply with National Emission Standards for Asbestos, 40 CFR 61, Subpart M? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. | Are visible emissions possible to the outside air? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | Were emissions cleaned before discharge? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | (If yes, complete air cleaning standards XIII and continue.) | | |

VII. FABRICATION (See 61.149 for applicability)

- | | | | |
|--|--|------------------------------|-----------------------------|
| | Are visible emissions to the outside air possible? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|--|--|------------------------------|-----------------------------|

Table D-5 (cont.)

Were emissions cleaned before discharge? ☐ Yes ☐ No

(If yes, complete air cleaning standards XIII and continue.)

VIII. INSULATING MATERIALS

Was insulating material containing asbestos that was molded and friable or wet applied and friable after drying, installed or re-installed after April 5, 1984? ☐ Yes ☐ No

IX. WASTE DISPOSAL FOR ASBESTOS MILLS

A. Was asbestos-containing waste material disposed at an acceptable site? ☐ Yes ☐ No

(See Active Waste Disposal Site requirements XIV.)

B. Are visible emissions possible to the outside air? ☐ Yes ☐ No

Were emissions cleaned before discharge? ☐ Yes ☐ No

(If yes, complete air cleaning standards XIII and continue.)

C. Identify the disposal method for wastes from control devices.

1. Was the waste mixed with a wetting agent prior to disposal? ☐ Yes ☐ No

a. Was the agent recommended by the manufacturer for this use? ☐ Yes ☐ No

b. Was all asbestos containing material adequately mixed with the wetting agent? ☐ Yes ☐ No

c. Are visible emissions possible to the outside air? ☐ Yes ☐ No

Were emissions cleaned before discharge? ☐ Yes ☐ No

(If yes, complete air cleaning standards XIII and continue.)

Table D-5 (cont.)

- d. Was wetting suspended when the ambient temperature at the waste disposal site dropped below -9.5°C (15°F)? ☐ Yes ☐ No
- (1) Are hourly temperature records kept during suspension of wetting operations? ☐ Yes ☐ No
- (2) Are records kept for at least 2 years? ☐ Yes ☐ No
2. Was waste mixed with water to form a slurry? ☐ Yes ☐ No
- a. Are visible emissions possible to the outside air? ☐ Yes ☐ No
- Were emissions cleaned before discharge? ☐ Yes ☐ No
- (If yes, complete air cleaning standards and continue XIII.) ☐ Yes ☐ No
- b. Was all wet asbestos-containing material in leak-tight containers? ☐ Yes ☐ No
- c. Were the containers labeled with appropriate warnings? ☐ Yes ☐ No
- (See 61.152(b)(1)(iv) or OSHA 29 CFR 1910.1001(g)(2)(ii) for labeling requirements.)
3. Is waste processed into nonfriable pellets or other shapes? ☐ Yes ☐ No
- a. Are visible emissions possible from the operation to the outside air? ☐ Yes ☐ No
- b. Were emissions cleaned before discharge? ☐ Yes ☐ No
- (If yes, complete air cleaning standards XIII and continue.)
4. If an alternate method is used, was it approved by the Administrator? ☐ Yes ☐ No

Table D-5 (cont.)

- X. STANDARD FOR WASTE DISPOSAL FOR MANUFACTURING, DEMOLITION, RENOVATION, SPRAYING AND FABRICATING OPERATIONS
- A. Are wastes disposed at acceptable sites? ☐ Yes ☐ No
(See Active Waste Disposal Site XIV requirements.)
- B. Are visible emissions possible to the outside air during collection, processing, incineration, packaging, transporting or deposition of waste? ☐ Yes ☐ No
1. Was the waste mixed with a wetting agent prior to disposal? ☐ Yes ☐ No
- a. Was the agent recommended by the manufacturer for this use? ☐ Yes ☐ No
- b. Was all asbestos containing material adequately mixed with the wetting agent? ☐ Yes ☐ No
- c. Are visible emissions possible to the outside air? ☐ Yes ☐ No
- Were emissions cleaned before discharge? ☐ Yes ☐ No
- (If yes, complete air cleaning standards XIII and continue.)
- d. Was wetting suspended when the ambient temperature at the waste disposal site dropped below -9.5 °C (15 °F)? ☐ Yes ☐ No
- (1) Are hourly temperature records kept during suspension of wetting operations? ☐ Yes ☐ No
- (2) Are records kept for at least 2 years? ☐ Yes ☐ No
2. Was waste mixed with water to form a slurry? ☐ Yes ☐ No
- a. Are visible emissions possible to the outside air? ☐ Yes ☐ No
- (If yes, complete air cleaning standards XIII and continue.)
- b. Was all wet asbestos-containing material in leak-tight containers? ☐ Yes ☐ No

Table D-5 (cont.)

c.	Were the containers labeled with appropriate warnings?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	(See 61.152(b)(1)(iv) or OSHA 29 CFR 1910.1001(g)(2)(ii) for labeling requirements.)		
3.	Is waste processed into nonfriable pellets or other shapes?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
a.	Are visible emissions possible from the operation to the outside air?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
b.	Were emissions cleaned before discharge?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	(If yes, complete air cleaning standards XIII and continue.)		
4.	If an alternate method is used, was it approved by the Administrator?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
XI. STANDARDS FOR INACTIVE WASTE DISPOSAL SITES FOR ASBESTOS MILLS AND MANUFACTURING AND FABRICATING OPERATIONS			
A.	Are visible emissions possible from the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is the site covered with at least 15 centimeters (6 inches) of clean compacted material?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is a vegetation cover present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is the site covered with at least 60 centimeters (2 feet) of clean compacted material?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is a dust suppression agent applied that has been recommended by the manufacturer and approved by the Administrator?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
B.	Is there a barrier restricting access to the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
C.	Are warning signs placed at 100-meter (330-foot) or less intervals around the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
1.	Are they easily read?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2.	Do they meet the size requirements 61.153(b)(1)ii)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Table D-5 (cont.)

3.	Do they meet the legend requirements of 61.153(b)(1)(iii)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
D.	Has the Administrator approved an alternate access control method?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
XII. AIR CLEANING STANDARDS			
A.	Are fabric filter collection devices used?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If no, go to D.		
1.	Is the filter pressure drop no more than .995 kilopascal (4 inches water guage)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2.	Does the air flow permeability meet the requirements of 61.154(a)(1)(ii)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3.	Does the fabric meet the requirements of 61.154(a)(1)(iii)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4.	If a synthetic fabric is used, is the fill yarn spun?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
B.	Is all equipment properly installed, used, operated and maintained?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
C.	Are bypasses only used during suspect or emergency conditions?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
D.	Has the Administrator authorized wet collectors if fabric creates a fire or explosion hazard?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
E.	Has the Administrator authorized the use of any other alternate cleaning equipment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
XIII. REPORTING REQUIREMENTS			
	Has the facility submitted the following information to the Administrator by July 4, 1984 (90 days after April 5, 1984)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A.	For all sources:		
1.	Description of the emission control equipment for each process?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2.	The pressure drop across the fabric filter, if used?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Table D-5 (cont.)

3.	The airflow permeability of a woven fabric filter and of synthetic, if the the fill yarn is spun?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
B.	For sources subject to 61.151 and 152:		
1.	Description of each process that generates asbestos-containing waste?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2.	The average weight of material disposed in kg. per day?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3.	The emission control methods used?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4.	The type of disposal method or site and the name, location and operator of the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
C.	For sources subject to 61.153:		
1.	Description of the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2.	Methods used to comply with the standards?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
XIV. ACTIVE WASTE DISPOSAL SITE STANDARDS			
A.	Are visible emissions possible from the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is at least 15 centimeters (6 inches) of compacted cover placed on the waste at the end of each day or 24-hour period?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is dust suppressant used that has been approved by the Administrator?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If an alternate method is used, has it been approved by the Administrator?		
B.	Is there a barrier restricting access to the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
C.	Are warning signs placed at 100-meter (330-foot) or less intervals around the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
1.	Are they easily read?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2.	Do they meet the size requirements of 61.153(b)(1)(ii)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3.	Do they meet the legend requirements of 61.153(b)(1)(iii)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

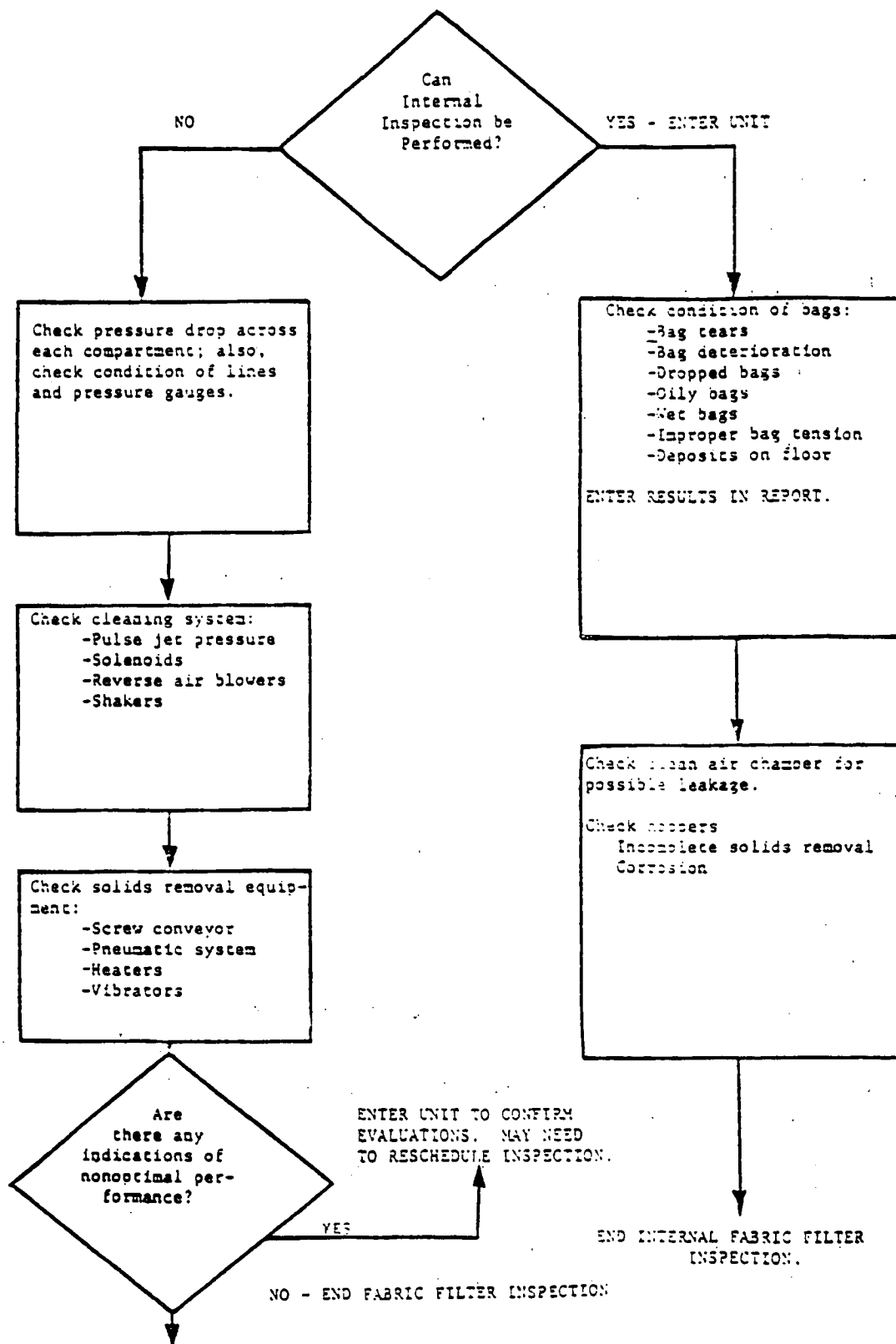


Figure D-1

Fabric Filter Inspection Flowsheet

[From Enforcement Workshop on Plant Inspection & Evaluation, Volume II, Draft, EPA, OE, SSE, February 1979].

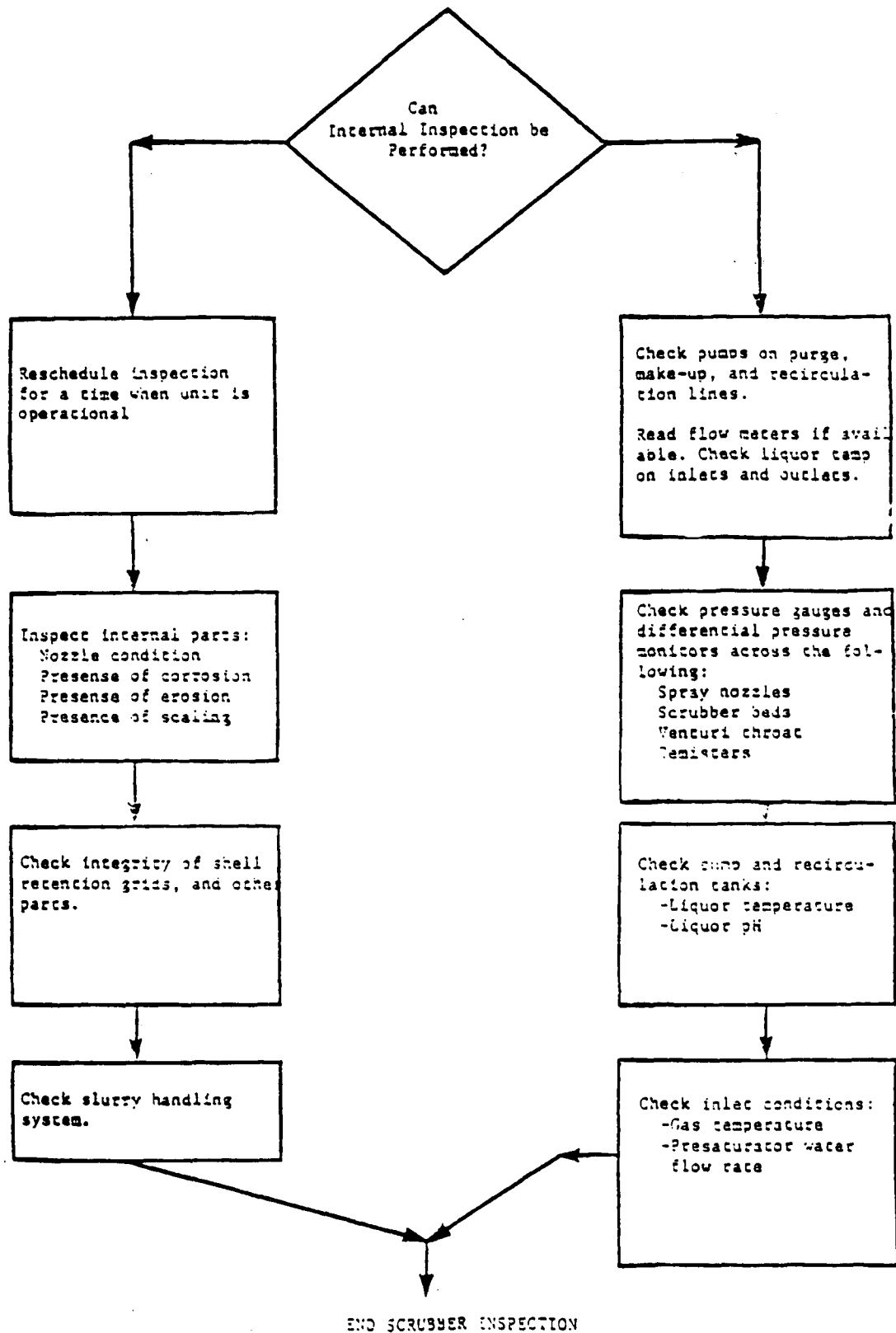


Figure D-2
Scrubber Inspection Flowsheet

[From Enforcement Workshop on Plant Inspection & Evaluation, Volume II, Draft, EPA, OE, SSE, February 1979].

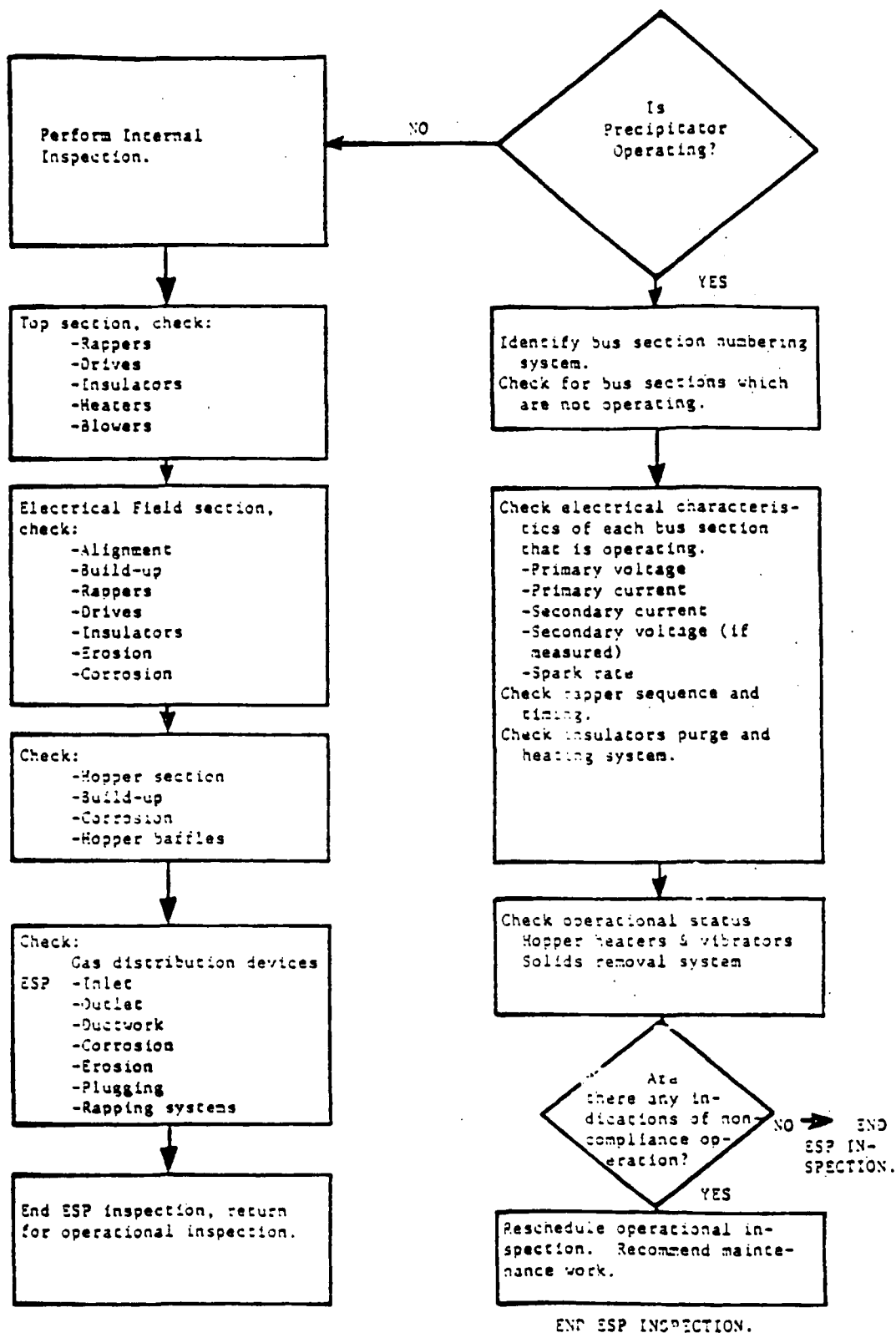


Figure D-3

Electrostatic Precipitator Inspection Flowsheet

[From Enforcement Workshop On Plant Inspection & Evaluation,
Volume II, Draft, EPA, OE, SSE, Washington, D.C., February 1979].

APPENDIX E
WATER POLLUTION CHECKLISTS

Table E-1
NPDES Compliance Inspection Report (Form 3560-3)

		United States Environmental Protection Agency Washington, D. C. 20460		Form Approved OMB No. 2040-0003 Approval Expires 7-31-85	
NPDES Compliance Inspection Report					
Section A: National Data System Coding					
Transaction Code		NPDES		yr./mo./day	
1	2	3	4	5	6
7	8	9	10	11	12
Inspection Type		Inspector		Fac Type	
13	14	15	16	17	18
Remarks					
Reserved		Facility Evaluation Rating		BI	
21	22	23	24	25	26
27	28	29	30	31	32
Reserved		Reserved		Reserved	
33	34	35	36	37	38
39	40	41	42	43	44
Section B: Facility Data					
Name and Location of Facility Inspected			Entry Time <input type="checkbox"/> AM <input type="checkbox"/> PM		Permit Effective Date
			Exit Time/Date		Permit Expiration Date
Name(s) of On-Site Representative(s)			Title(s)		Phone No(s)
Name, Address of Responsible Official			Title		Contacted <input type="checkbox"/> Yes <input type="checkbox"/> No
			Phone No.		
Section C: Areas Evaluated During Inspection (S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)					
Permit	Flow Measurement	Pretreatment	Operations & Maintenance		
Records/Reports	Laboratory	Compliance Schedules	Sludge Disposal		
Facility Site Review	Effluent/Receiving Waters	Self-Monitoring Program	Other:		
Section D: Summary of Findings/Comments (Attach additional sheets if necessary)					
Name(s) and Signature(s) of Inspector(s)		Agency/Office/Telephone		Date	
Signature of Reviewer		Agency/Office		Date	
Regulatory Office Use Only					
Action Taken			Date		Compliance Status
					<input type="checkbox"/> Noncompliance
					<input type="checkbox"/> Compliance

INSTRUCTIONS

Section A: National Data System Coding (*i.e.*, PCS)

Column 1: Transaction Code: Use N, C, or D for New, Change, or Delete. All inspections will be *new* unless there is an error in the data entered.

Columns 3-11: NPDES Permit No. Enter the facility's NPDES permit number. (*Use the Remarks columns to record the State permit number, if necessary.*)

Columns 12-17: Inspection Date. Insert the date entry was made into the facility. Use the year/month/day format (e.g., 82/06/30 = June 30, 1982).

Column 18: Inspection Type. Use one of the codes listed below to describe the type of inspection:

- | | | |
|---------------------------|-------------------------------|-------------------------|
| A — Performance Audit | E — Corps of Engrs Inspection | S — Compliance Sampling |
| B — Biomonitoring | L — Enforcement Case Support | X — Toxic Sampling |
| C — Compliance Evaluation | P — Pretreatment | |
| D — Diagnostic | R — Reconnaissance Inspection | |

Column 19: Inspector Code. Use one of the codes listed below to describe the *lead agency* in the inspection.

- | | |
|--|---|
| C — Contractor or Other Inspectors (<i>Specify in Remarks columns</i>) | N — NEIC Inspectors |
| E — Corps of Engineers | R — EPA Regional Inspector |
| J — Joint EPA/State Inspectors—EPA lead | S — State Inspector |
| | T — Joint State/EPA Inspectors—State lead |

Column 20: Facility Type. Use one of the codes below to describe the facility.

- 1 — Municipal. Publicly Owned Treatment Works (POTWs) with 1972 Standard Industrial Code (SIC) 4952.
- 2 — Industrial. Other than municipal, agricultural, and Federal facilities.
- 3 — Agricultural. Facilities classified with 1972 SIC 0111 to 0971.
- 4 — Federal. Facilities identified as Federal by the EPA Regional Office.

Columns 21-66: Remarks. These columns are reserved for remarks at the discretion of the Region.

Column 70: Facility Evaluation Rating. Use information gathered during the inspection (regardless of inspection type) to evaluate the quality of the facility self-monitoring program. Grade the program using a scale of 1 to 5 with a score of 5 being used for very reliable self-monitoring programs, 3 being satisfactory, and 1 being used for very unreliable programs.

Column 71: Biomonitoring Information. Enter D for static testing. Enter F for flow through testing. Enter N for no biomonitoring.

Column 72: Quality Assurance Data Inspection. Enter Q if the inspection was conducted as followup on quality assurance sample results. Enter N otherwise.

Columns 73-80: These columns are reserved for regionally defined information.

Section B: Facility Data

This section is self-explanatory.

Section C: Areas Evaluated During Inspection

Indicate findings (S, M, U, or N) in the appropriate box. Use Section D and additional sheets as necessary. Support the findings, as necessary, in a brief narrative report. Use the headings given on the report form (e.g., Permit, Records/Reports) when discussing the areas evaluated during the inspection. The heading marked "Other" may include activities such as SPCC, BMP's, and multimedia concerns.

Section D: Summary of Findings/Comments

Briefly summarize the inspection findings. This summary should abstract the pertinent inspection findings, not replace the narrative report. Reference a list of attachments, such as completed checklists taken from the NPDES Compliance Inspection Manuals and pretreatment guidance documents, including effluent data when sampling has been done. Use extra sheets as necessary.

Appendix E (cont.)
 SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN
 (SPCC) CHECKLIST

1. Does this facility have:
 - a. More than 1,320 gallons of above-ground oil storage capacity or a single container with a capacity of more than 660 gallons? Yes ☐ No ☐
 - b. More than 42,000 gallons of underground oil storage capacity? Yes ☐ No ☐
2. Does this facility have a Spill Prevention Control and Countermeasure (SPCC) plan? Yes ☐ No ☐
 - a. Has the SPCC plan been certified by a registered professional engineer? Yes ☐ No ☐
 - b. Date the SPCC plan was last certified: _____
 - c. Original date SPCC plan was prepared: _____
3. Are there other State or local requirements for hazardous materials spill prevention and control plan? Yes ☐ No ☐
 - a. Is this hazardous materials SPCC plan available? Yes ☐ No ☐
4. Have any reportable spills of petroleum products or hazardous materials occurred at this facility within the last review period? Yes ☐ No ☐

List: _____

 - a. Were these spills reported to the proper authorities? Yes ☐ No ☐
 - b. Were these spills cleaned up properly? Yes ☐ No ☐
 - c. Were measures taken to prevent future spills? Yes ☐ No ☐
 - d. Is there evidence of these reported spills or other spills at the facility? Yes ☐ No ☐

Appendix E (cont.)

5. Does the SPCC plan include:
- a. Notification procedures? Yes ____ No ____
- b. Inspection procedures? Yes ____ No ____
- c. A facility drawing which includes storage tanks and containment areas? Yes ____ No ____
- d. Oil spill prevention designee? Yes ____ No ____
6. Does the facility have:
- a. Secondary containment or diversionary structures at oil storage areas? Yes ____ No ____
- b. Spill cleanup materials available or information on where these materials are available? Yes ____ No ____
- c. Security? Yes ____ No ____

COMMENTS:

[illegible]

APPENDIX F
RCRA CHECKLISTS

RCRA INSPECTION CHECKLISTS*

Table F-1

RCRA COMPLIANCE INSPECTION REPORT
GENERATORS CHECKLIST

Note: State laws, in many cases are more stringent than Federal law for many of the generator requirements, but particularly in the area of accumulation time. Be aware of these differences and modify this protocol as needed!

- Does the State in which the generator is located have RCRA State authorization? ___ Yes ___ No
- Has the generator identified the differences between the State program and the Federal program? ___ Yes ___ No

SECTION A - EPA ID NUMBER

1. Does generator have EPA ID Number? ___ Yes ___ No
 - a. If yes, EPA ID Number _ _ _ _ _
2. Are there other EPA ID Numbers used at this location? ___ Yes ___ No
(If yes, list the other numbers and identify where they are used and for what they were issued.)

SECTION B - HAZARDOUS WASTE DETERMINATION

1. Are hazardous waste(s) (§261 Subpart D) generated at this facility? ___ Yes ___ No
 - a. If yes, list waste and quantities on an attachment. (Include EPA Hazardous Waste Number. Provide waste name and description.)
2. Are solid wastes that exhibit hazardous characteristics generated (§261 Subpart C)? ___ Yes ___ No
 - a. If yes, list wastes and quantities on an attachment. Include EPA Hazardous Waste Number. Provide waste name and description.)
 - b. How are waste characteristics determined (testing, knowledge of process)? _____

* These checklists are to be used only as guides and references should be made to both RCRA and the regulations (40 CFR Parts 260 through 270) for recent changes.

Table F-1 (cont.)

- (1) If determined by testing, did generator use test methods in Part 261, Subpart C (or equivalent)? ___ Yes ___ No
- (2) If equivalent test methods used, attach copy of methods.
3. Identify total quantities of hazardous waste generated per month, for the last 12 months, for both acutely hazardous waste and other hazardous waste.

(kg/mo)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Acutely toxic												
Other hazardous waste												

4. Does the generator qualify as a Small Quantity Generator (SQG) for the entire last 12-month period (§261.5)? ___ Yes ___ No
(If no, list the months that the generator was a full generator.)
5. Is generator exempted or conditionally exempted from regulation because of:
- a. Small quantity generator (§261.5) ___ Yes ___ No
- b. Produces nonhazardous waste at this time (§261.4) ___ Yes ___ No
6. Are any nonhazardous wastes generated? ___ Yes ___ No
- a. If yes, did generator identify them as nonhazardous by testing or by knowledge of process? ___ Yes ___ No
- (1) If determined by testing, did generator use test methods in Part 261 Subpart C (or equivalent)? ___ Yes ___ No
- (2) If equivalent test methods used, attach copy of methods.
- b. List wastes and quantities deemed nonhazardous or processes from which nonhazardous wastes were produced. Use narrative explanation sheets.

Table F-1 (cont.)

SECTION C - UNIFORM HAZARDOUS WASTE MANIFEST SYSTEM

1. Has generator shipped hazardous waste offsite since November 19, 1980 (§262 Subpart B)? ___ Yes ___ No
- a. If no skip to Section D, Question #8.
- b. If yes identify the name, EPA ID Number and site address(es) of the offsite facilities. (Use back of page for additional facilities if needed.)

Name _____	Address _____
Name _____	Address _____
Name _____	Address _____
Name _____	Address _____

2. If not exempt, is the waste manifested on the Uniform Hazardous Waste Manifest (§262, Appendix) ___ Yes ___ No

If so, do the manifests contain:

- | | |
|--|----------------|
| a. Name and mailing address of generator? | ___ Yes ___ No |
| b. The name and EPA ID Number of each transporter? | ___ Yes ___ No |
| c. DOT waste description, including proper shipping name, hazardous class and DOT identification number? | ___ Yes ___ No |
| d. Number and type of containers (if applicable)? | ___ Yes ___ No |
| e. Quantity of each waste transported? | ___ Yes ___ No |
| f. Name, EPA ID Number and site address of facility designated to receive the waste? | ___ Yes ___ No |
| g. The following certification: effective September 1, 1985? | ___ Yes ___ No |

"I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have

Table F-1 (cont.)

determined to be economically practicable and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment."

3. Does the facility designated to receive the waste have:

- a. A RCRA permit? ☐ Yes ☐ No
- b. Interim status? ☐ Yes ☐ No
- c. A permit, license or registration from a state to manage municipal or industrial solid waste? ☐ Yes ☐ No

4. Does the generator retain copies of the manifests? ☐ Yes ☐ No

If yes, complete 6a through 6e (§262.23).

(Inspect completed manifests at random and indicate how many manifests were inspected. Obtain copies of all manifests with violations and describe violations.)

a. Did the generator sign and date all manifests? ☐ Yes ☐ No

Who signed the manifests for the generator?

Name _____ Title _____

Name _____ Title _____

- b. Did the generator obtain the handwritten signature and date of acceptance from the initial transporter? ☐ Yes ☐ No
- c. Does generator retain one copy of the manifest signed by the generator and transporter? ☐ Yes ☐ No
- d. Do return copies of manifest include facility owner/operator signature and date of acceptance? ☐ Yes ☐ No
- e. If the copy of the manifest from the facility was not returned within 45 days, did generator file an Execution Report (§262.42)? ☐ Yes ☐ No

If yes, did it contain:

(1) A legible copy of the manifest ☐ Yes ☐ No

Table F-1 (cont.)

- (2) A cover letter explaining generator's efforts to locate waste and the results of those efforts?

___ Yes ___ No

- f. Has generator retained copies for 3 years?

___ Yes ___ No

SECTION D - PRETRANSPORT REQUIREMENTS

1. Does the generator package waste?

___ Yes ___ No

If not, why not? (Skip the rest of Section D) _____

If yes, complete the following questions.

2. Does generator package waste in accordance with DOT requirements 49 CFR 173, 178 and 179 (§262.30)?

___ Yes ___ No

3. Inspect containers to be shipped. (Use narrative explanation sheet to describe containers and condition.)

- a. Are containers leaking, corroding or bulging?

___ Yes ___ No

- b. Is there evidence of heat generation from incompatible wastes in containers?

___ Yes ___ No

- c. Are containers labeled according to DOT (49 CFR 172 Subpart E)?

___ Yes ___ No

- d. Are containers marked according to DOT requirements (49 CFR 172 Subpart D)?

___ Yes ___ No

- e. Is each container of 110 gallons or less marked with the following words?

___ Yes ___ No

"HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency."

Generator's name and address _____

Manifest Document Number _____

(Note: During accumulation times, see below, only the words "Hazardous Waste" must appear on containers of 110 gallons or less.)

Table F-1 (cont.)

4. If there are any vehicles present onsite loading or unloading hazardous waste, inspect for presence of placards (49 CFR 172 Subpart F). Note this instance on narrative explanation sheet.
5. Accumulation time (§262.34)
- a. Is facility a permitted storage facility? ☐ Yes ☐ No
- b. Has all hazardous waste, generated in excess of the SQG limits, been shipped offsite or sent to onsite treatment, storage or disposal within 90 days. ☐ Yes ☐ No
- (1) Is the waste placed in containers and managed in accordance with the container management requirements for facility owners or operators (§265 Subpart I)? ☐ Yes ☐ No
(Generators who qualify for the SQG provisions need not comply with the 50-foot buffer requirement for ignitable waste.)
- (2) Is the date upon which each period of accumulation began clearly marked on each container? ☐ Yes ☐ No
- (3) What system does the generator use to determine when the SQG rate is exceeded? Explain _____

- (4) Are the words "Hazardous Waste" clearly marked on each container of 110 gallons or less and visible for inspection? ☐ Yes ☐ No
- (5) For quantities in excess of the respective SQG rates, is the generator complying with the facility standards for Preparedness and Prevention (Part 265 Subpart C) and Contingency Plan/Emergency Procedures (Part 265 Subpart D)? ☐ Yes ☐ No
- (6) For hazardous waste generated below the respective SQG rates, is the generator complying with the modified requirements for SQGs (§261.5)? ☐ Yes ☐ No

Table F-1 (cont.)

- (7) Do the facility hazardous waste management personnel have the requisite training documented in their personnel file (§265.16) ☐ Yes ☐ No
- c. Have hazardous wastes, generated at a rate between 100 kg/mo and 1,000 kg/mo, been accumulated less than 180 days, or 270 days if the facility is over 200 miles away (effective September 22, 1986)? ☐ Yes ☐ No
- d. Is the total amount of all hazardous waste accumulated onsite and generated below 100 kg/mo, less than 1,000 kg? ☐ Yes ☐ No
- e. Is the total amount of hazardous waste, accumulated onsite, generated at a rate between 100 kg/mo and 1,000 kg/mo, less than 6,000 kg? ☐ Yes ☐ No
- f. Does the generator inspect containers for leakage or corrosion (§265.174)? ☐ Yes ☐ No
- (1) If yes, how often? _____
(Review inspection records.)
- g. Does the generator handle ignitable or reactive waste? ☐ Yes ☐ No
- (1) If yes, does the generator locate ignitable or reactive wastes at least 15 meters (50 feet) inside facility's property line (§265.176)? ☐ Yes ☐ No
- (2) Does the generator separate and protect ignitable or reactive wastes from sources of ignition (§265.17)? ☐ Yes ☐ No

Note: If generator accumulates waste onsite for more than 90 days, fill out facilities checklist, Section A-9, Personnel Training; Section B - Preparedness and Prevention; and Section C - Contingency Plan and Emergency Procedures.

9. Describe storage/accumulation area(s). Use photographs and narrative explanation sheet.

SECTION E - RECORDKEEPING AND RECORDS

1. Is generator keeping the following records (§262.40)?

(Note: The following must be kept for a minimum of 3 years.)

Table F-1 (cont.)

- a. Manifests or signed copies from designated facilities? ☐ Yes ☐ No
- b. Biennial reports (does not apply to SQGs)? ☐ Yes ☐ No
- c. Exception reports (does not apply to SQGs)? ☐ Yes ☐ No
- d. Test results or other means of determination, as required? ☐ Yes ☐ No
2. Where are facility records kept (at the facility, offsite, etc.) _____
3. Who is responsible for keeping the records? _____
 _____ Title: _____

SECTION F - SPECIAL CONDITIONS

1. Have hazardous wastes been received from or transported to a foreign source (§262.50)? ☐ Yes ☐ No
- If yes,
- a. For imports, has generator filed a notice with the Regional Administrator? ☐ Yes ☐ No
- b. For exports, has generator filed a notice with the Administrator, Office of International Activities, A-106, 4 weeks before the initial shipment to each country? ☐ Yes ☐ No
- c. For exports, are waste manifests signed by the foreign consignee? ☐ Yes ☐ No
- d. If the generator transported wastes out of the country, has he received confirmation of delivery of the shipment? ☐ Yes ☐ No
- (1) Identify those shipments for which confirmation of delivery have not been received within 90 days of shipment by manifest number.
- _____
- _____
- _____
- (2) Has generator filed an Exception Report for all those shipments identified in 1d(1) above? ☐ Yes ☐ No

Table F-1 (cont.)

- e. Has the exporter filed, with the Administrator,
an export summary report for the previous year
by March 1?

___ Yes ___ No

Table F-2
RCRA COMPLIANCE INSPECTION REPORT
TRANSPORTER(S) AND VEHICLE CHECKLIST

A. General Transporter Information

1. Does transporter have EPA Identification Number? ☐ Yes ☐ No

EPA No. _____

2. Does more than one transporter or address use this identification number? How many? ☐ Yes ☐ No

3. Identify the mode(s) of transportation used by transporter.

☐ Air ☐ Rail ☐ Highway ☐ Water ☐ Other (specify)

Specification: _____

4. Does transporter have all necessary permits? ☐ Yes ☐ No

State permit number: _____

Federal permit number: _____

5. Does transporter ship hazardous waste out of the U.S.? ☐ Yes ☐ No

6. Does transporter ship hazardous waste into the U.S.? ☐ Yes ☐ No

If yes, complete "Generator Checklist" for these hazardous wastes.

7. Does transporter mix hazardous wastes of different DOT shipping descriptions by placing them into a single container? ☐ Yes ☐ No

If yes, complete "Generator Checklist" for these mixtures.

B. Transfer Facilities

1. Does the transporter store manifested shipments of hazardous waste in containers meeting the requirements of §262.30 at a transfer facility? ☐ Yes ☐ No

2. Is all manifested hazardous waste, temporarily stored by the transporter, shipped offsite within 10 days? ☐ Yes ☐ No

If not, complete "TSDF Checklist".

Table F-2 (cont.)

C. Manifest and Recordkeeping Requirements

1. Are all shipments of hazardous wastes accompanied by an approved manifest (EPA Form 8700-22 or EPA Form 8700-22A)? ___Yes ___No
2. Does all required information appear on the manifest (49 CFR 172.205)? ___Yes ___No
3. Inspect completed manifests at random and indicate number inspected. Obtain copies of all manifests with deficiencies and provide narrative explanation.
4. If transporter has shipped hazardous waste(s) out of the United States, is the date of exit and the name and address of receiving facility indicated on manifest? ___Yes ___No
5. Special Conditions
 - a. If transportation occurs by water (bulk shipment), does the transporter:
 - (1) Ship to the designated facility? ___Yes ___No
 - (2) Maintain shipping papers with information contained on manifest? ___Yes ___No
 - (3) Obtain designated facility signature and date of receipt? ___Yes ___No
 - (4) Retain a copy of manifest or shipping papers? ___Yes ___No
 - b. If transportation occurs by rail, does the transporter:
 - (1) Sign and date manifest acknowledging acceptance? ___Yes ___No
 - (2) Return signed copy to nonrail transporter? ___Yes ___No
 - (3) Forward at least three copies of the manifest to the next appropriate destination? ___Yes ___No

Table F-2 (cont.)

- (4) Retain one copy of manifest and rail shipping papers? ☐ Yes ☐ No
- (5) Ensure shipping papers accompany the waste(s)? ☐ Yes ☐ No
- (6) On delivery, obtain name, date and signature of designated facility or transporter? ☐ Yes ☐ No
6. Does transporter retain copies of manifests and shipping papers for the required 3-year period? ☐ Yes ☐ No
- D. Manifest Compliance
1. Does the transporter ship all waste to either the designated facility listed on the manifest or the alternate facility (when applicable) or the next designated transporter? ☐ Yes ☐ No
2. Does the transporter assure delivery to the designated facility outside the U.S.? ☐ Yes ☐ No
3. What procedures does the transporter follow when delivery of hazardous wastes to designated facility is prevented? (Use narrative explanation sheets.)
- E. Pretransport Review
1. Does the transporter check to assure that the generator has complied with the following requirements?
- a. Has the generator packaged wastes in accordance with DOT requirements (49 CFR 173)? ☐ Yes ☐ No
- b. Has the generator packaged wastes in repacks? ☐ Yes ☐ No
- c. Has the generator labeled wastes in accordance with DOT requirements (49 CFR 172, Subpart E)? ☐ Yes ☐ No
- d. Has the generator marked wastes in accordance with DOT requirements (49 CFR 172, Subpart D)? ☐ Yes ☐ No
- e. Has generator marked each container of 110 gallons or less used in such transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304? ☐ Yes ☐ No

Table F-2 (cont.)

HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator's Name and Address: _____

Manifest Document Number: _____

- f. Did generator placard or offer the initial transporter the appropriate placards according to DOT (49 CFR 172, Subpart F)? ___ Yes ___ No

F. Emergency Action

1. Has transporter ever been involved in a discharge of hazardous wastes? ___ Yes ___ No
- a. If yes, was the National Response Center (800-424-8802 or 202-426-2675), U.S. Coast Guard, the State and the principal office of transporter notified? ___ Yes ___ No
- b. Was a written report submitted to DOT within 10 days following the discharge ___ Yes ___ No

Attach copy of report (if available).

2. Has the transporter obtained an Emergency Identification Number from EPA for the cleanup operation? ___ Yes ___ No
- a. If yes, identify the number(s): _____

G. Transport Vehicle Inspection

1. Company/name/designation of vehicle: _____
2. Truck driver's name: _____
3. What hazardous wastes are listed on manifest? List in narrative explanation.
4. Form of containerization of hazardous wastes:
- _____ drums, size: _____ gallons (ea), _____ amount (i.e., 30 drums)
- _____ portable tanks - number _____ volume (ea) _____
- _____ gondola
- _____ tanker-type _____ volume (ea) _____

Table F-2 (cont.)

5. Narrative explanation of condition of containerization (leaking, corroded, fuming, damaged, improperly sealed, poor condition, improper lining, etc.)
6. Is truck properly placarded and marked (49 CFR Subpart F)? ___ Yes ___ No
7. Did generator have to repackage wastes by truck driver's request? ___ Yes ___ No
8. Is truck driver aware of any special handling of materials? ___ Yes ___ No
- If yes, describe.
9. Does truck driver have the National Response Center phone number accessible? ___ Yes ___ No

COMMENTS:

Table F-3

RCRA COMPLIANCE INSPECTION REPORT
TREATMENT, STORAGE AND DISPOSAL FACILITIES (TSDFs)
CHECKLIST FOR INTERIM STATUS FACILITIES (PART 265)

SECTION A - GENERAL FACILITY STANDARDS

1. Does facility have EPA identification number (§265.11)? ___ Yes ___ No
 - a. If yes, EPA identification number: _____
If no, explain: _____

2. Has facility received hazardous waste from a foreign source (§265.12)? ___ Yes ___ No
 - a. If yes, has he filed a notice with the Regional Administrator 4 weeks in advance of the initial shipment? ___ Yes ___ No

Waste Analysis

3. Does the facility have a written waste analysis plan (§265.13)? ___ Yes ___ No
 - a. If yes, is a copy maintained at the facility? ___ Yes ___ No
If no, proceed to question 5.
4. Does the plan include:
 - a. Parameters for which each waste will be analyzed? ___ Yes ___ No
 - b. Rationale for the selection of these parameters? ___ Yes ___ No
 - c. Test methods used to test for these parameters? ___ Yes ___ No
 - d. Sampling method used to obtain sample? ___ Yes ___ No
 - e. Frequency with which the initial analysis will be reviewed or repeated? ___ Yes ___ No
 - (1) If yes, does it include requirements to re-test when the process or operation generating the waste has changed? ___ Yes ___ No
 - f. (For offsite facilities) Waste analyses that generators have agreed to supply? ___ Yes ___ No

Table F-3 (cont.)

- g. (For offsite facilities) Procedures which are used to inspect and analyze each movement of hazardous waste including:
- (1) Procedures to be used to determine the identity of each movement of waste? ☐ Yes ☐ No
- (2) Sampling method to be used to obtain representative sample of the waste to be identified? ☐ Yes ☐ No

Security

5. Does the facility provide adequate security to minimize the possibility for the unauthorized entry of persons or livestock onto the active portions of the facility (§265.14)? ☐ Yes ☐ No

If no, describe inadequacies. (Use narrative explanation sheet and include a drawing indicating any inadequacies in the facility's security system.)

If yes, is security provided through:

- a. 24-hour surveillance system (e.g., television monitoring or guards)? ☐ Yes ☐ No

OR

- b. (1) Artificial or natural barrier around facility (e.g., fence or fence and cliff)? ☐ Yes ☐ No

Describe type of security: _____

AND

- (2) Means to control entry through entrances (e.g., attendant, television monitors, locked entrance, controlled roadway access)? ☐ Yes ☐ No

Describe type of security: _____

6. Is a sign with the legend, "Danger-Unauthorized Personnel Keep Out", posted at the entrance to the active portion of the facility? ☐ Yes ☐ No

Is it written in English and legible from at least 25 feet? ☐ Yes ☐ No

Table F-3 (cont.)

Note: The sign must also be written in any other language predominant in the area surrounding the facility (e.g., in New Mexico and Texas areas bordering Mexico, the sign must be in Spanish).

If a sign exists with a legend other than "Danger-Unauthorized Personnel Keep Out", what does that legend say?

General Inspection Requirements

7. a. Does the owner/operator maintain a written schedule for inspecting (§265.15)? ___ Yes ___ No
- (1) Monitoring equipment, if applicable? ___ Yes ___ No
- (2) Safety and emergency equipment? ___ Yes ___ No
- (3) Security devices? ___ Yes ___ No
- (4) Operating and structural equipment, if applicable? ___ Yes ___ No
- (5) Does the schedule or plan identify the types of problems to be looked for during inspection? ___ Yes ___ No
- (a) Malfunction or deterioration (e.g., inoperative sump pump, leaking fitting, eroding dike, corroded pipes or tanks, etc.)? ___ Yes ___ No
- (b) Operator error? ___ Yes ___ No
- (c) Discharges (e.g., leaks from valves or pipes, joint breaks, etc.)? ___ Yes ___ No
- b. Is a written schedule for these inspections maintained at the facility? ___ Yes ___ No
- (1) Are records of these inspections maintained in an inspection log (§265.15)? ___ Yes ___ No
- (2) If yes, does it include:
- (a) Date and time of inspection? ___ Yes ___ No
- (b) Name of inspector? ___ Yes ___ No

Table F-3 (cont.)

- (c) Notation of observations? ☐ Yes ☐ No
- (d) Date and nature of repairs or remedial action? ☐ Yes ☐ No
- (3) Are there any malfunctions or other deficiencies noted in the inspection log that remain uncorrected? Use narrative explanation sheet. ☐ Yes ☐ No
- (4) Are records of the inspection log maintained at the facility for at least 3 years? (Obtain copies of incomplete or inadequate inspection records.) ☐ Yes ☐ No

Personnel Training

8. Does the owner/operator maintain a personnel training program (§265.16)? ☐ Yes ☐ No
- a. If yes,
- (1) Is the program directed by a person trained in hazardous waste management procedures? ☐ Yes ☐ No
- (2) Is the program designed to prepare employees to respond effectively to hazardous waste emergencies? ☐ Yes ☐ No
- (3) Is a training review given annually? ☐ Yes ☐ No
- c. Does the owner/operator keep the following records:
- (1) Job title and written job description of each position? ☐ Yes ☐ No
- (2) Description of the type and amount of introductory and continuing training? ☐ Yes ☐ No
- (3) Documentation that training has been given to employees? ☐ Yes ☐ No
- c. Are these records maintained at the facility? ☐ Yes ☐ No

Table F-3 (cont.)

Requirements for Ignitable, Reactive or Incompatible Waste

9. Does facility handle ignitable or reactive waste (§265.17)? ___ Yes ___ No
- a. If yes, is waste separated and confined from sources of ignition or reaction? ___ Yes ___ No
- b. Are "No Smoking" signs posted in hazardous areas where ignitable or reactive wastes are handled? ___ Yes ___ No
10. Observe containers (§265.17)
- a. Are containers leaking, corroding or bulging? ___ Yes ___ No
- Use narrative explanation sheet to describe containers in this condition.
- b. Has the facility ever placed incompatible wastes together? ___ Yes ___ No
- If yes, what were the results? Use narrative explanation sheet. Look for signs of mixing of incompatible wastes (e.g., fire, toxic mist, heat generation, bulging containers, etc.).

SECTION B - PREPAREDNESS AND PREVENTION

1. Is there evidence of fire, explosion or contamination of the environment (§265.31)? ___ Yes ___ No
- If yes, use narrative explanation sheet to explain.
2. Is the facility equipped with (§265.32)?
- a. Easily accessible internal communications or alarm system? ___ Yes ___ No
- b. Telephone or two-way radio to call emergency response personnel? ___ Yes ___ No
- c. Portable fire extinguishers, fire control equipment, spill control equipment and decontamination equipment? ___ Yes ___ No
- (1) Is this equipment tested and maintained as necessary to assure its proper operation? ___ Yes ___ No
- (Note last inspection/test date.)

Table F-3 (cont.)

- d. Water of adequate volume for hoses, sprinklers or water spray system? ☐ Yes ☐ No
- (1) Describe source of water _____
- (2) Indicate flow rate and/or pressure and storage capacity, if applicable. _____
-
3. Is there sufficient aisle space to allow unobstructed movement of personnel and equipment (§265.35)? ☐ Yes ☐ No
4. Has the owner/operator made arrangements with the local authorities to familiarize them with characteristics of the facility (§265.37)? ☐ Yes ☐ No
- If no, has the owner/operator attempted to make such arrangements? ☐ Yes ☐ No
5. In the case that more than one police or fire department might respond, is there a designated primary authority (§265.37)? ☐ Yes ☐ No
- If yes, indicate primary authority: _____
- a. Is the fire department a city, volunteer or onsite fire department? _____
-
6. Does the owner/operator have phone numbers of and agreements with State emergency response teams, emergency response contractors and equipment suppliers? ☐ Yes ☐ No
- Are they readily available to the emergency coordinator (§265.37)? ☐ Yes ☐ No
7. Has the owner/operator arranged to familiarize local hospitals with the properties of hazardous waste handled and typed of injuries that could result from fires, explosions or releases at the facility? ☐ Yes ☐ No
- If no, has the owner/operator attempted to do this (§265.37)? ☐ Yes ☐ No
8. If the State or local authorities decline to enter into the above-referenced agreements, is there documentation of this (§265.37)? ☐ Yes ☐ No

Table F-3 (cont.)

SECTION C - CONTINGENCY PLAN AND EMERGENCY PROCEDURES

1. Does the facility have a contingency plan (§265.52)? ☐ Yes ☐ No
- a. If yes, does it contain:
- (1) Actions to be taken in response to emergencies? ☐ Yes ☐ No
- (2) Description of arrangements with police, fire and hospital officials? ☐ Yes ☐ No
- (3) List of names, addresses, phone numbers of personnel qualified to act as emergency coordinator? ☐ Yes ☐ No
- (4) List of all emergency equipment at the facility? ☐ Yes ☐ No
- (5) Evacuation plan for facility personnel? ☐ Yes ☐ No
2. Is a copy of the contingency plan maintained at the facility (§265.53)? ☐ Yes ☐ No
3. Has a copy been supplied to local police and fire departments (§265.53)? ☐ Yes ☐ No
4. Is the plan a revised SPCC plan (§265.52)? ☐ Yes ☐ No
5. Is there an emergency coordinator onsite or within short driving distance of the plant at all times? ☐ Yes ☐ No

If yes, list primary emergency coordinator: _____

SECTION D - MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

1. Has facility received hazardous waste from offsite since November 19, 1980 (§265.71)? ☐ Yes ☐ No
- If no, proceed to question 5.
- If yes, does the facility retain copies of all manifests? (Inspect manifests at random, indicate number inspected, describe deficiencies and obtain copies of all deficient manifests.) ☐ Yes ☐ No
2. Has the facility received any hazardous waste from a rail or water (bulk shipment) transporter since November 19, 1980 (§265.71)? ☐ Yes ☐ No

Table F-3 (cont.)

- | | | |
|----|--|--------------|
| a. | If yes, is it accompanied by a shipping paper? | ___Yes ___No |
| | (1) Has the owner/operator signed and dated the shipping paper and returned a copy to the generator? | ___Yes ___No |
| | (2) Is a signed copy given to the transporter? | ___Yes ___No |
| 3. | Has the facility received any shipments of hazardous waste since November 19, 1980, which were inconsistent with the manifest (§265.72)? | ___Yes ___No |
| a. | If yes, has he resolved the discrepancy with the generator and transporter? | ___Yes ___No |
| b. | If no, has Regional Administrator been notified? | ___Yes ___No |
| 4. | Has the facility received any waste (that does not come under the small generator exclusion) not accompanied by a manifest (§265.76)? | ___Yes ___No |
| | If yes, has facility submitted an unmanifested waste report to the Regional Administrator? | ___Yes ___No |
| 5. | Does the facility have a written operating record (§265.73)? | ___Yes ___No |
| a. | Is a copy maintained at the facility? | ___Yes ___No |
| b. | Does the record include: | |
| | (1) Description and quantity of each hazardous waste and the methods and dates of its treatment, storage or disposal at the facility? | ___Yes ___No |
| | (2) Location and quantity of each hazardous waste? | ___Yes ___No |
| | (a) Is this information cross-referenced with specific manifest document numbers, if applicable? | ___Yes ___No |
| | (3) Location and quantity of each hazardous waste recorded on a map or diagram of each cell or disposal area (for disposal facilities only)? | ___Yes ___No |
| | (4) Record and results of waste analyses? | ___Yes ___No |

Table F-3 (cont.)

- | | | |
|--|------------------------------|-----------------------------|
| (5) Reports of incidents involving implementation of the contingency plan (if applicable)? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (6) Records and results of required inspections? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (7) Monitoring, testing or analytical data where required? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (8) Closure cost estimates and, for land disposal facilities, post-closure cost estimates? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

SECTION E - PLANS AND REPORTS

1. Have all plans and reports been visually inspected and/or been made available for inspection (§265.74)? ☐ Yes ☐ No

List plans and/or reports not made available for inspection.

2. Did operator provide inspector with a drawing of the facility? ☐ Yes ☐ No

If yes, identify which are hazardous waste management units on the drawing.

3. Indicate which of the following apply to wastes managed by this facility:

- ☐ Groundwater Monitoring Program (Subpart F) [Table F-4]
- ☐ Containers (Subpart I) [Table F-5]
- ☐ Tanks (Subpart J) [Table F-6]
- ☐ Surface Impoundments (Subpart K) [Table F-7]
- ☐ Waste Piles (Subpart L) [Table F-8]
- ☐ Land Treatment (Subpart M) [Table F-9]
- ☐ Landfill (Subpart N) [Table F-10]
- ☐ Incinerator (Subpart O) [Table F-11]
- ☐ Thermal Treatment (Subpart P) [Table F-12]
- ☐ Chemical, Physical and Biological Treatment (Subpart Q) [Table F-13]
- ☐ Underground Injection (Subpart R) [Appendix M]

Table F-4
GROUNDWATER MONITORING

1. Is the facility operating under
 - a. Interim status ___Yes ___No
 - b. RCRA permit (or State equivalent) ___Yes ___No
2. Has the facility implemented a groundwater monitoring program under
 - a. Interim status ___Yes ___No
 - b. RCRA Permit (or State equivalent) ___Yes ___No
3. Has a waiver demonstration been prepared? ___Yes ___No
 - a. Does it describe the potential for migration of waste from the waste management unit to the uppermost aquifer? ___Yes ___No
 - b. Does it describe the potential for waste to enter a water supply or surface water? ___Yes ___No
 - c. Is it certified by a qualified geologist or geotechnical engineer? ___Yes ___No
4. Have required monitoring reports been submitted to EPA and/or the State? ___Yes ___No
5. Has an adequate hydrogeologic characterization investigation been conducted at the facility? ___Yes ___No
 - a. Has the uppermost aquifer been adequately defined? ___Yes ___No
 - b. Have flow directions been adequately defined for the uppermost aquifer? ___Yes ___No
 - c. Have groundwater flow rates been determined for hydrologic units within the uppermost aquifer? ___Yes ___No
6. Has the facility developed and implemented an operation and maintenance plan for the monitoring well network and sampling equipment? ___Yes ___No

Table F-4 (cont.)

INTERIM STATUS PROGRAMS

7. Did the facility initially implement a detection monitoring program (40 CFR 265.92) or an assessment monitoring program (40 CFR 265.93)? ___Yes ___No
8. If a detection monitoring program was implemented,
- a. Was a sampling and analysis plan prepared? ___Yes ___No
- b. Was a sampling and analysis plan in effect on November 19, 1981? ___Yes ___No
- c. Did the program include upgradient wells not apparently affected by the facility? ___Yes ___No
- d. Did the program include at least four down-gradient wells at the limit of the waste management area(s)? ___Yes ___No
9. Sampling and Analysis Plan
- a. Is the sample collection adequately described? ___Yes ___No
- b. Is the sample preservation adequately described? ___Yes ___No
- c. Is the sample shipping adequately described? ___Yes ___No
- d. Are the analytical procedures specifically identified? ___Yes ___No
- e. Is the sample chain-of-custody adequate? ___Yes ___No
- f. Are the quality assurance/quality control procedures identified? ___Yes ___No
- g. Are parameters to be analyzed for those specified in 40 CFR 265.92(b)? ___Yes ___No
- h. Does the plan contain a sampling schedule? ___Yes ___No
- i. Does the schedule conform to regulatory requirements? ___Yes ___No
10. If an assessment monitoring program was implemented,
- a. Did the notification of the Regional Administrator or State Director comply with 40 CFR 265.93(d)? ___Yes ___No

Table F-4 (cont.)

- | | | |
|---|------------------------------|-----------------------------|
| b. Did submittal of the plan comply with 40 CFR 265.93(d)? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c. Was it certified by a qualified geologist or a geotechnical engineer? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d. Was it approved by EPA or the State? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| e. Does it determine the rate and extent of waste migration? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| f. Does it determine the concentrations of waste constituents in groundwater? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| g. Has a groundwater quality assessment report been submitted? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| h. Does the facility keep records on the results of analyses and evaluations? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

RCRA PERMIT PROGRAMS

- | | | |
|---|------------------------------|-----------------------------|
| 11. Which of the following programs are required by the permit? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| a. Detection monitoring (40 CFR 264.98) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. Compliance monitoring (40 CFR 264.99) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c. Corrective action (40 CFR 264.100) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 12. Have sampling and analysis plans been developed for the required groundwater monitoring program(s)? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| a. Has the required plan(s) been approved by EPA or the State? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. Has the program been implemented? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c. Are the selected monitoring parameters adequate? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d. Is the point of compliance properly located? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| e. Is the delineation of waste management areas appropriate? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Table F-4 (cont.)

- f. Is leakage from non-regulated units expected to affect groundwater quality at the point of compliance? ___Yes ___No
- g. Have any groundwater samples been analyzed for Appendix VIII parameters (40 CFR 261)? ___Yes ___No

MONITORING WELLS

13. Are wells
- a. Adequately designed ___Yes ___No
 - b. Properly constructed ___Yes ___No
 - c. Appropriate materials used ___Yes ___No
 - d. Located as indicated on map in sampling plan ___Yes ___No
 - e. Marked with proper identifying designation ___Yes ___No
 - f. Installed in appropriate hydrologic zones ___Yes ___No
 - g. Secured from unauthorized entry ___Yes ___No
 - h. Protected from damage by vehicular traffic ___Yes ___No
 - i. Surveyed for elevation ___Yes ___No
 - j. Marked for surveyed point ___Yes ___No
14. Are the locations and numbers of wells adequate to satisfy the requirements of 40 CFR 265.91 for interim status facilities or 40 CFR 264.97 for permitted facilities? ___Yes ___No
15. Are the wells being adequately maintained? ___Yes ___No
16. Are the wells accessible year round? ___Yes ___No

MONITORING PROCEDURES

17. Are adequate field procedures being used for
- a. Measuring depth to water ___Yes ___No

Table F-4 (cont.)

b. Purging the well before sampling	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Measuring pH, conductivity and temperature	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Other field parameters	<input type="checkbox"/> Yes	<input type="checkbox"/> No
e. Collecting samples	<input type="checkbox"/> Yes	<input type="checkbox"/> No
f. Preserving samples	<input type="checkbox"/> Yes	<input type="checkbox"/> No
g. Cleaning reused equipment between wells	<input type="checkbox"/> Yes	<input type="checkbox"/> No
h. Storing samples after collection	<input type="checkbox"/> Yes	<input type="checkbox"/> No
i. Disposal of purge water	<input type="checkbox"/> Yes	<input type="checkbox"/> No
j. Monitoring for vapors and radiation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
18. Is the field crew adequately trained for sampling?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
19. Are the records kept during sampling adequate?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
20. Are sampling and analysis plan procedures being followed for:		
a. Approaching the well	<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. Opening the well	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Measuring the water level	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Purging the well	<input type="checkbox"/> Yes	<input type="checkbox"/> No
e. Collecting samples	<input type="checkbox"/> Yes	<input type="checkbox"/> No
f. Preserving samples	<input type="checkbox"/> Yes	<input type="checkbox"/> No
g. Chain-of-custody	<input type="checkbox"/> Yes	<input type="checkbox"/> No
h. Documenting sampling	<input type="checkbox"/> Yes	<input type="checkbox"/> No
i. Shipping samples	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Table F-5
CONTAINER STORAGE CHECKLIST
(Subpart I)

1. Does the facility store hazardous waste in containers? ___Yes ___No
2. Are the containers marked "Hazardous Waste" or equivalent to identify the contents? ___Yes ___No
3. Are the containers in good condition (check for leaks, corrosion, bulges, etc.)? ___Yes ___No
If no, explain in narrative and document with photograph.
4. If a container is found to be leaking, does the operator transfer the hazardous waste from the leaking container? ___Yes ___No
5. Is the waste compatible with the containers and/or its liner? ___Yes ___No
If no, explain in narrative.
6. Are the stored containers closed? ___Yes ___No
If no, explain in narrative.
7. Are containers holding hazardous waste opened, handled or stored in such a manner as to cause the container to rupture or leak? ___Yes ___No
8. Does facility have records that the containers are inspected at least weekly? ___Yes ___No
If no, explain in the narrative the frequency of inspection.
9. Are containers holding ignitable or reactive wastes located at least 15 meters (50 feet) from the facility property line? ___Yes ___No
If no, explain in narrative and document with photograph.
10. Are incompatible wastes stored in the same containers? ___Yes ___No
11. Are containers holding incompatible wastes kept apart by physical barrier or sufficient distance? ___Yes ___No
If no, explain in narrative and document with photograph(s).
12. Does the facility have satellite storage at the point of hazardous waste generation §262.34 (C)(1)? ___Yes ___No

Table F-5 (cont.)

13. Do the containers at any one generation point exceed 55 gallons of hazardous waste or 1 quart of acutely hazardous wastes? ☐ Yes ☐ No
14. If yes, in the previous question:
- (a) Is the container holding the excess wastes marked with the date the excess amount began accumulating? ☐ Yes ☐ No
- (b) Has this excess waste been accumulating for more than 3 days? ☐ Yes ☐ No
15. Are these points at or near the process generating the waste? ☐ Yes ☐ No

Table F-6
TANKS CHECKLIST
(Subpart J)

NOTE: List each tank and specify compliance status. Complete an individual checklist for each tank. [Collective checklist(s) may be used for all similar tanks in compliance.] This checklist does not apply to covered underground tanks that cannot be entered for inspection.

1. Are there any tanks which are not being used which the facility no longer plans to use? ___Yes ___No
 - a. If yes, has all hazardous waste and hazardous waste residue been removed from these tanks, discharge control equipment, and discharge confinement structures? ___Yes ___No
2. Are tanks presently used to treat or store waste? ___Yes ___No
 - a. If no, do not complete rest of form.
 - b. If yes, inspect tanks.
3. Is there evidence that wastes placed in the tank are incompatible with the tank or liner? ___Yes ___No
 Note any evidence of ruptures, leaks or corrosion. Use narrative explanations sheet.
4. Are there any uncovered tanks? ___Yes ___No
 - a. If no, do not complete 4b thru e.
 - b. If yes, do they have 2 feet (60 cm) freeboard? ___Yes ___No
 OR
 - c. A containment structure (e.g., dike or trench)? ___Yes ___No
 OR
 - d. A drainage control system? ___Yes ___No
 OR
 - e. A diversion structure (e.g., standby tank)? ___Yes ___No

NOTE: The structure in c, d or e must have a capacity that equals or exceeds the volume of the top 2 feet (60 cm) of the tank.

Table F-6 (cont.)

If the answers to 4b thru e are "no", explain current conditions using narrative sheets.

5. Are any of the tanks continuous feed? ☐ Yes ☐ No
- a. If yes, is it equipped with a means to stop flow (e.g., waste feed cutoff or bypass to a standby tank)? ☐ Yes ☐ No

Waste Analysis

6. Is the tank used to store one waste exclusively? ☐ Yes ☐ No
- a. If no, what are the different wastes stored in the tank? Use narrative explanation sheet.
- (1) Are waste analyses and trial tests conducted on these wastes? ☐ Yes ☐ No
- OR
- Does the owner/operator have written documented information on similar treatment of similar wastes under similar operating conditions? ☐ Yes ☐ No
- (2) Is this information retained in the operating record? ☐ Yes ☐ No

Inspections

7. Does the owner/operator inspect the following at least daily, where present: (Indicate which items are present in 7 and 8.)
- a. Discharge control equipment (e.g., waste feed cutoff, bypass and/or drainage systems)? ☐ Yes ☐ No
- b. Data gathered from monitoring equipment (e.g., pressure and temperature gages)? ☐ Yes ☐ No
- c. Level of waste in each uncovered tank? ☐ Yes ☐ No
8. Does the owner/operator inspect the following at least weekly:
- a. Construction materials of tanks for corrosion or leaks? ☐ Yes ☐ No
- b. Construction materials of and area surrounding discharge confinement structures for erosion or signs of leakage? ☐ Yes ☐ No

Table F-6 (cont.)

9. What is the procedure for assessing the condition of the tank(s)? Explain in narrative (e.g., how does the procedure allow for detection of cracks, leaks or corrosion or procedures for emptying the tank to allow entrance, etc.).
10. Does the facility have a closure plan? ___Yes ___No
- a. Does the plan address the closure of each tank? ___Yes ___No
- If no, explain in narrative.
- b. Is the plan maintained at the facility? ___Yes ___No
11. Are ignitable or reactive wastes placed in tanks? ___Yes ___No
- a. If yes, are they treated, rendered or mixed before or immediately after placement in the tank so it no longer meets the definition of ignitable or reactive? ___Yes ___No
- OR
- b. Is the waste protected from sources of ignition or reaction?
- (1) If yes, use narrative explanations sheet to describe separation and confinement procedures.
- (2) If no, use narrative explanations sheet to describe sources of ignition or reaction.
- OR
- c. Is the tank used solely for emergencies? ___Yes ___No
12. Has the facility ever placed incompatible wastes in the tank? ___Yes ___No
- a. If yes, what were the results. Use narrative explanations sheet. Look for signs of mixing of incompatible wastes (e.g., fire, toxic mist, heat generation, bulging containers, etc.).

Table F-6 (cont.)

13. If a waste is to be placed in a tank that previously held an incompatible waste, was that tank washed? ☐ Yes ☐ No
- a. If yes, describe washing procedures. Use narrative explanation sheet.
- Describe how it is possible for incompatible wastes to be placed in the same tank. Use narrative explanations sheet.

Table F-7
SURFACE IMPOUNDMENTS CHECKLIST
(Subpart K)

NOTE: List each surface impoundment and specify compliance status. Complete an individual checklist for each impoundment. [Collective checklist(s) may be used for all similar impoundments.]

1. Are there any surface impoundments which are not being used which the facility does not plan to use in the future? ___Yes ___No
 - a. If yes, has all hazardous waste and hazardous waste residue been removed from the impoundment? ___Yes ___No
2. Are impoundments presently used to treat or store waste? ___Yes ___No
3. Has any new unit, replacement of an existing unit or lateral expansion of an existing unit that is within the area identified in the Part A, received waste beginning 05/08/85? ___Yes ___No
 - a. If no, go to question 4.
 - b. If yes,
 - (1) Did the facility notify the Regional Administrator (RA) 60 days prior to receiving waste? ___Yes ___No
 - (2) Did the facility file a Part B within 6 months of receipt of such notice? ___Yes ___No
 - c. Does the impoundment have at least two liners and a leachate collection system? ___Yes ___No

If no, use narrative explanation to describe alternate system or, if waiver was granted, demonstration to RA (§265.221).
4. Does the impoundment have at least 2 feet (60 cm) of freeboard? ___Yes ___No

If no, what is the freeboard? _____
5. Is there evidence of overtopping of the dike? ___Yes ___No

If yes, describe. _____

Table F-7 (cont.)

6. What type of dike (e.g., earthen, concrete, steel) does the impoundment have?
- a. If the dike is earthen, does it have adequate protective cover (e.g., grass, shale, rock) to minimize wind and water erosion? Use narrative explanation sheet to explain deficiencies. ☐ Yes ☐ No
- b. Describe dike and its condition. _____
-
7. What wastes are treated or stored in the impoundment? Use narrative explanations sheet.
8. Are hazardous wastes chemically treated in the impoundment? ☐ Yes ☐ No
- a. If yes:
- (1) Are waste analyses and trial tests conducted on these wastes? ☐ Yes ☐ No
- (2) Does the owner/operator have written documented information on similar treatment of similar wastes under similar operating conditions? ☐ Yes ☐ No
- b. Is this information retained in the operating record? ☐ Yes ☐ No
9. Do records indicate that freeboard level is inspected daily? ☐ Yes ☐ No
10. Do records indicate the impoundment, dike and surrounding vegetation are inspected to detect leaks, deterioration or failures at least once a week? ☐ Yes ☐ No
11. Does the facility maintain a record of the closure plan on site? ☐ Yes ☐ No
12. Are ignitable or reactive wastes placed in the impoundment? ☐ Yes ☐ No
- a. If no, proceed to question 13.
- b. If yes, are they treated, rendered or mixed before or immediately after placement in the impoundment so they no longer meet the definition of ignitable or reactive? ☐ Yes ☐ No

Table F-7 (cont.)

OR

- c. Are the wastes protected from possible ignition or reaction sources and certified as such by a qualified chemist? Use narrative explanation sheet to describe situation. ___ Yes ___ No

OR

- d. Is the impoundment used solely for emergencies? ___ Yes ___ No
- (1) If yes, has treatment, storage or disposal been conducted on these wastes? Describe this situation. ___ Yes ___ No
-
-

13. Has the facility ever placed incompatible wastes in the impoundment? ___ Yes ___ No
- a. If yes, what were the results. Use narrative explanation sheet. Look for signs of mixing of incompatible wastes (e.g., fire, toxic mist, heat generation, bulging containers, etc.).
14. What is the impoundment lined with? _____
15. Does the impoundment solely neutralize corrosive waste or waste listed in Subpart I solely because of corrosivity? ___ Yes ___ No

Table F-8
WASTE PILES CHECKLIST
(Subpart L)

NOTE: Waste piles may also be managed as a landfill.

1. Is the pile containing hazardous waste protected from wind? ___Yes ___No

2. For offsite facilities, is a representative sample of waste from each incoming shipment analyzed before the waste is added to the pile to determine the compatibility of the wastes? ___Yes ___No
 - a. For offsite facilities, does the analysis include a visual comparison of color and texture? ___Yes ___No

3. Is the leachate or runoff from the pile considered a hazardous waste? ___Yes ___No
 - a. If yes, is the pile managed with following?
 - (1) An impermeable base compatible with the waste? ___Yes ___No
 - (2) Run-on diversion? ___Yes ___No
 - (3) Leachate and runoff collection? ___Yes ___No

OR

 - b. Is the pile protected from precipitation and run-on by some other means? ___Yes ___No
Describe on narrative explanations sheet.

4. Are liquids or wastes containing free liquids placed in the pile? ___Yes ___No

5. Are ignitable or reactive wastes placed in the pile? ___Yes ___No
 - a. If yes, are they treated, rendered or mixed before or immediately after placement in the pile so it no longer meets the definition of ignitable or reactive? Use narrative sheet to describe procedure. ___Yes ___No

OR

 - b. Is the waste protected from sources of ignition or reaction? ___Yes ___No

Table F-8 (cont.)

- (1) If yes, use narrative explanations sheet to describe separation and confinement procedures.
- (2) If no, use narrative explanations sheet to describe source of ignition or reaction.
6. Is there evidence of fire, explosion, gaseous emissions, leaching or other discharge from the hazardous waste pile? Use narrative explanation sheet. ___ Yes ___ No
- a. Does the waste pile have a leachate detection, collection and removal system? ___ Yes ___ No
- b. If no, does the inspection plan include a schedule of inspection of the devices for controlling precipitation and run-on and runoff? ___ Yes ___ No
- c. Is the waste pile periodically removed for inspection of the base? ___ Yes ___ No
7. Have incompatible wastes ever been placed together in the waste pile? ___ Yes ___ No
- If yes, what was the result? _____
-
8. Have there been other wastes previously stored at the site of the present waste pile? ___ Yes ___ No
- a. Have hazardous wastes been piled in the same area where incompatible wastes or materials were previously piled? ___ Yes ___ No
- b. If yes, was the area decontaminated? Use narrative explanation sheet. ___ Yes ___ No
9. Is a closure plan available? ___ Yes ___ No
- a. Will all waste residues, system components, subsoils, etc., be decontaminated and/or removed? ___ Yes ___ No
- b. If the above cannot be decontaminated, will the facility be closed as a landfill? ___ Yes ___ No

Table F-9
LAND TREATMENT CHECKLIST
(Subpart M)

1. Is run-on diverted away from the land treatment facility?
Describe using narrative explanations sheet. ___ Yes ___ No
2. Is runoff from the land treatment facility collected? ___ Yes ___ No
3. Is the runoff analyzed to see if it is a hazardous waste? ___ Yes ___ No
 - a. If the runoff is considered hazardous, how is it handled? Use narrative explanation sheet. ___ Yes ___ No
 - b. If it is not a hazardous waste, is it discharged through a point source to surface waters? ___ Yes ___ No

(1) If yes, list NPDES Permit No. _____
4. Is wind dispersal controlled?
Describe using narrative explanations sheet. ___ Yes ___ No
5. What hazardous wastes are treated at the land treatment facility?
Use narrative explanation sheet.

Part 261, Subpart D Listed Wastes

Characteristic Wastes

- a. For those listed wastes, were analyses done to determine the concentrations of those constituents which caused the waste to be listed? ___ Yes ___ No

(1) If yes, what are these concentrations? Use narrative explanation sheet.
- b. For those characteristic wastes designated EP toxic because of the extraction procedure, what are the concentrations of the following?

<u>Concentration</u>	<u>Waste</u>
Arsenic	
Barium	
Cadmium	
Chromium	
Lead	
Mercury	
Selenium	
Silver	

Table F-9 (cont.)

	<u>Concentration</u>	<u>Waste</u>
Endrin		
Lindane		
Methoxychlor		
Toxaphene		
2,4 D		
2,4,5-TP Silvex		
6. Obtain a copy of the land treatment process and include it with the report.		
7. Are food chain crops grown?		<input type="checkbox"/> Yes <input type="checkbox"/> No
a. If no, go to question 9.		
b. If yes, can the owner/operator demonstrate from field testing that arsenic, lead, mercury or other toxic waste constituents:		
(1) Will not be transferred to the food portion of the crop or ingested by food chain animals		<input type="checkbox"/> Yes <input type="checkbox"/> No
OR		
(2) Will not occur in greater concentrations in the crops on the facility than in the same crops on untreated soils in the same region?		<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Is the following information used for making the above demonstration and is it kept at the facility?		
(1) Tests for specific wastes and application rates being used at the facility		<input type="checkbox"/> Yes <input type="checkbox"/> No
(2) Crop characteristics		<input type="checkbox"/> Yes <input type="checkbox"/> No
(3) Soil characteristics		<input type="checkbox"/> Yes <input type="checkbox"/> No
(4) Sample selection criteria		<input type="checkbox"/> Yes <input type="checkbox"/> No
(5) Sample size determination		<input type="checkbox"/> Yes <input type="checkbox"/> No
(6) Analytical methods used		<input type="checkbox"/> Yes <input type="checkbox"/> No
(7) Statistical procedures		<input type="checkbox"/> Yes <input type="checkbox"/> No

Table F-9 (cont.)

- d. Was the Regional Administrator notified by January 19, 1981 that food chain crops had been or would be grown at the facility? ___Yes ___No
- e. Does the facility treat wastes that contain cadmium? ___Yes ___No
- (1) If no, go to question 9.
- (2) If yes, list these wastes. Use narrative explanation sheet.
- (3) Was the pH of the soil and waste mixture 6.5 or greater at the time of each waste application? ___Yes ___No
- (a) If the pH was less than 6.5, did the waste contain cadmium concentrations of 2 mg/kg (dry weight) or less? ___Yes ___No
- (4) Is the annual application rate of cadmium less than 0.5 kg/ha (kilograms per hectare) for the following: tobacco, leafy vegetables, or root crops grown for human consumption? ___Yes ___No
- (a) For all other food chain crops, is the annual cadmium application rate :
- (1) Less than or equal to 2.0 kg/ha (through June 30, 1984) ___Yes ___No
- (2) Less than or equal to 1.25 kg/ha (July 1, 1984 through December 31, 1986) ___Yes ___No
- (3) Less than or equal to 0.5 kg/ha (January 1, 1987 to present) ___Yes ___No
8. Does the facility have an unsaturated zone monitoring plan? ___Yes ___No
- a. If no, explain circumstances on narrative explanation sheet.
- b. If yes, does the plan include:
- (1) Soil monitoring ___Yes ___No
- (2) Soil pore water monitoring (water above the saturated zone) ___Yes ___No

Table F-9 (cont.)

- | | | |
|---|------------------------------|-----------------------------|
| (3) Sample depths below waste incorporation | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (4) Number of samples to be taken | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (5) Frequency and time of sampling | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (6) Analysis of soil samples | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 9. Does implementation of the plan yield: | | |
| a. Background soil-pore liquid quality and chemical makeup of soil not affected by treatment zone leakage | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. The quality of soil-pore liquid and chemical makeup of soil below the treatment zone | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 10. Have background levels of soil quality been established? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 11. Is monitoring occurring in the soil-pore zone immediately below the treatment zone? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 12. Has a sampling and analysis plan been prepared and does it include: | | |
| a. Sample collection techniques | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. Sample preservation and shipment | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c. Analytical procedures | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d. Chain-of-custody control | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 13. Has a statistically significant change over background been found in the soil quality? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| a. If yes, has the RA or State been notified? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. Have operating practices been modified? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 14. Is the following information (for each hazardous waste) kept at the facility? | | |
| a. Application dates | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. Application rates | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c. Quantities | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d. Waste location | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Table F-9 (cont.)

15. Does the facility have a closure/post-closure plan? ☐ Yes ☐ No
- a. If yes, where is it kept? _____
16. Are ignitable or reactive wastes treated at the facility? (circle appropriate waste) ☐ Yes ☐ No
- a. If yes, are the wastes immediately incorporated into the soil so that they are no longer reactive or ignitable? ☐ Yes ☐ No
- b. Describe or attach a copy of treatment.
17. Are incompatible wastes placed in the facility? ☐ Yes ☐ No
- a. Are the incompatible wastes placed in different locations in the facility? ☐ Yes ☐ No
- (1) If no, look for signs of fire, heat generation, toxic mists, etc. (use narrative explanation sheet).

Table F-10
LANDFILLS CHECKLIST
(Subpart N)

1. Has any new unit, replacement of an existing unit or lateral expansion of an existing unit that is within the area identified in the Part A, received waste after 05/08/85? ___ Yes ___ No
 - a. If no, proceed to question 4.
 - b. If yes,
 - (1) Did the facility notify the Regional Administrator 60 days prior to receiving waste? ___ Yes ___ No
 - (2) Did the facility file a Part B within 6 months of receipt of such notice? ___ Yes ___ No
 - c. Does the landfill have at least two liners and a leachate collection system? ___ Yes ___ No

If no, use narrative explanation sheet to describe alternate system, or, if waiver was granted, to describe demonstration to Regional Administrator (§265.301).
2. Is there a run-on control system? ___ Yes ___ No
Describe on narrative explanations sheet.
3. Is runoff from the landfill collected? ___ Yes ___ No
 - a. Is runoff analyzed to determine if it is a hazardous waste? ___ Yes ___ No
 - b. If it is a hazardous waste, how is it managed? (Use narrative explanation sheet.)
 - c. Is the collected runoff discharged through a point source to surface waters? ___ Yes ___ No

If yes, list NPDES permit number _____
4. Is the landfill managed so that wind dispersal is controlled? (Note blowing debris.) ___ Yes ___ No
5. Is the following information maintained in the operating record? ___ Yes ___ No
 - a. On a map, the exact location and dimensions, including depth of each cell with respect to permanently surveyed benchmarks? ___ Yes ___ No

Table F-10 (cont.)

AND

- b. Contents of each cell and the approximate location of each hazardous waste type within each cell? ___ Yes ___ No
6. Are reactive or ignitable wastes placed in the landfill? ___ Yes ___ No
- a. If yes, are they treated, rendered or mixed before or immediately after placement in the landfill so they are no longer reactive or ignitable? ___ Yes ___ No
- b. Describe treatment, etc. or attach a copy of treatment.
7. Are incompatible wastes placed in the same landfill cell? ___ Yes ___ No
- a. If yes, what are the results? (Use narrative explanation sheet.) (Look for signs of mixing of incompatible wastes, e.g., fire, toxic mist, heat generation, etc.)
- Describe how it is possible for incompatible wastes to be placed in the same landfill cell. (Use narrative explanation sheet.)
8. Have bulk or non-containerized, hazardous liquid wastes or wastes containing free liquids been placed in the landfill since May 8, 1985? ___ Yes ___ No
9. Is the liquid waste treated chemically or physically so that free liquids are no longer present? (Use narrative explanation sheet.) ___ Yes ___ No
10. Are containers holding liquid wastes placed in the landfill? ___ Yes ___ No
- If yes,
- a. Has all free-standing liquid been removed? ___ Yes ___ No
- OR
- b. Has waste been mixed with absorbent or solidified so that free-standing liquid is no longer observed? ___ Yes ___ No
- OR
- c. Is the container very small, such as an ampule? ___ Yes ___ No

Table F-10 (cont.)

OR

- d. Is the container designed to hold free liquids for use other than storage, such as a battery or capacitor? ___Yes ___No

OR

- e. Is the container a lab pack? ___Yes ___No
11. Are empty containers placed in the landfill? ___Yes ___No
- a. If yes, are they reduced in volume (e.g., shredded, crushed)? ___Yes ___No
12. Does the landfill or cell(s) have a cover? ___Yes ___No
- a. If no, go to question 12.
- b. If yes, answer the following:
- (1) Is there evidence of site instability (e.g., erosion, settling)? (Use narrative explanation sheet.) ___Yes ___No
- (2) Is there evidence of ponding of water onsite? (Use narrative explanation sheet.) ___Yes ___No
- (3) Is there any indication of improper or inadequate drainage? (Use narrative explanation sheet.) ___Yes ___No
13. Does the facility have closure/post-closure plans? ___Yes ___No
- a. If yes, where are they maintained? _____
- b. Do the plans address the following items?
- (1) Control of pollutant migration? ___Yes ___No
- (2) Control of surface water infiltration? ___Yes ___No
- (3) Prevention of erosion? ___Yes ___No

Table F-11
INCINERATORS CHECKLIST
(Subpart 0)

1. Is the incinerator operating at steady state conditions (temperature and air flow) before adding hazardous waste? ___ Yes ___ No
If no, explain in narrative.
2. Is a waste analysis performed on hazardous waste not previously incinerated at facility? ___ Yes ___ No
3. Does it include analysis for the following?

a. Heating value	___ Yes	___ No
b. Halogen content	___ Yes	___ No
c. Sulfur content	___ Yes	___ No
d. Concentration of lead	___ Yes	___ No
e. Concentration of mercury	___ Yes	___ No
f. Is the above information documented in the operating record?	___ Yes	___ No

(NOTE: D and e are not required if the facility has written documented data that show the elements are not present.)

4. Are any of the following instruments existing on the incinerator? Does the owner/operator monitor them at least every 15 minutes when incinerating hazardous waste? Check under applicable column.

	<u>Existing</u>		<u>Monitored</u>	
Waste feed	___ Yes	___ No	___ Yes	___ No
Auxiliary fuel feed	___ Yes	___ No	___ Yes	___ No
Air flow	___ Yes	___ No	___ Yes	___ No
Incinerator temperature	___ Yes	___ No	___ Yes	___ No
Scrubber flow	___ Yes	___ No	___ Yes	___ No
Scrubber pH	___ Yes	___ No	___ Yes	___ No
Relevant level controls	___ Yes	___ No	___ Yes	___ No

(NOTE: Afterburner and temperature, O₂, and CO meters are examples of relevant level controls.)

- a. Does the owner/operator monitor the stack plume (emissions) at least hourly for:

(1) Color (normal)	___ Yes	___ No
--------------------	---------	--------

Table F-11 (cont.)

(2) Opacity	Yes	No
-------------	-----	----

- b. Does the owner/operator monitor the incinerator and associated equipment at least daily including: (circle those not in compliance)

- | | | |
|--|-----|----|
| (1) Pumps, valves, conveyors, pipes for leaks, spills and fugitive emissions. (Use narrative explanation sheet.) | Yes | No |
|--|-----|----|

- | | | |
|---------------------------------|-----|----|
| (2) Emergency shutdown controls | Yes | No |
|---------------------------------|-----|----|

- (3) System alarms Yes No

- | | | | |
|----|---|-----|----|
| c. | Are these inspections referenced in the inspection log? Review inspection plan, note deficiencies in narrative. | Yes | No |
|----|---|-----|----|

5. Is a closure plan maintained for the incinerator? Yes No

If yes, is it kept at the facility?	Yes	No
-------------------------------------	-----	----

6. What wastes are incinerated onsite?

[illegible]

Table F-12
THERMAL TREATMENT CHECKLIST
(Subpart P)

NOTE: Applies to thermal treatment of hazardous waste in devices other than incinerators.

1. Is the process a non-continuous (batch) process? ___Yes ___No
 - a. If no, is the process operating at steady State conditions (including temperature) before adding hazardous waste? ___Yes ___No
2. Is a waste analysis, for wastes not previously burned, documented in the operating record? ___Yes ___No
 - a. Does it include analyses for the following:

(1) Heating value	___Yes	___No
(2) Halogen content	___Yes	___No
(3) Sulfur content	___Yes	___No
(4) Concentration of lead	___Yes	___No
(5) Concentration of mercury	___Yes	___No
 - b. Is this information documented in the operating record? ___Yes ___No

(NOTE: 4 and 5 are not required if the facility has written documented data that show the elements are not present.)

3. Are the existing instruments which relate to combustion and emission control monitored at least every 15 minutes?

	<u>Existing</u>		<u>Monitored</u>
a. Waste feed	___Yes ___No		___Yes ___No
b. Auxiliary fuel feed	___Yes ___No		___Yes ___No
c. Treatment process temp.	___Yes ___No		___Yes ___No
d. Relevant process flow	___Yes ___No		___Yes ___No
e. Relevant controls (e.g., afterburner and temperature controls, O ₂ and CO meters)	___Yes ___No		___Yes ___No
4. Are stack plume (emissions) monitored at least hourly? ___Yes ___No
 - a. Color (normal) ___Yes ___No
 - b. Opacity ___Yes ___No
5. Is thermal treatment process equipment monitored at least daily including: (NOTE: circle those not in compliance). ___Yes ___No

Table F-12 (cont.)

- a. Pumps, valves, conveyors, pipes, etc., (for leaks, spills and fugitive emissions) ☐ Yes ☐ No
- b. Emergency shutdown controls ☐ Yes ☐ No
- c. System alarms ☐ Yes ☐ No
6. Is a closure plan maintained at the facility? ☐ Yes ☐ No
7. Is open burning or detonation of waste explosives conducted? ☐ Yes ☐ No
- a. If yes, is the detonation performed in accordance with the following table? ☐ Yes ☐ No

Pounds of Waste Explosives or Propellants	Minimum Distance From Open Burning or Detonation to the Property of Others
0-100	204m (670 ft.)
101-1,000	380m (1,250 ft.)
1,001-10,000	530m (1,730 ft.)
10,001-30,000	690m (2,260 ft.)

8. Is there evidence of open burning of hazardous wastes except for waste explosives? ☐ Yes ☐ No

Use narrative explanations sheet to describe details.

Table F-13
 CHEMICAL, PHYSICAL AND BIOLOGICAL TREATMENT CHECKLIST
 (Subpart Q)

NOTE: Applies to treatment in other than tanks, surface impoundments and land treatment facilities.

1. Describe treatment process (include information on wastes treated).
2. Inspect treatment process and equipment:
 - a. Are there any leaks, corrosion or other failures evident? ___Yes ___No
 If yes, describe. _____

3. Is the process a continuous feed system? ___Yes ___No
 - a. If yes, is it equipped with a means to stop waste inflow (e.g., waste feed cutoff system or bypass). ___Yes ___No
4. If hazardous waste is to be treated which is substantially different from any hazardous waste previously treated at the facility or if a substantially different process than any previously used at the facility is to be used to chemically treat hazardous wastes, are the following obtained:
 - a. Waste analyses and trial treatment tests (e.g., bench scale)? ___Yes ___No

OR

 - b. Written, documented information on similar treatment or similar wastes? ___Yes ___No
5. Does the owner/operator inspect the following, where present (indicate which items are present)?
 - a. At least daily
 - (1) Discharge control and safety equipment (e.g., waste feed cutoff, bypass, drainage or pressure relief systems)? ___Yes ___No
 - (2) Data gathered from monitoring equipment (e.g., pressure and temperature gauges)? ___Yes ___No

Table F-13 (cont.)

- b. At least weekly.
- (1) Construction materials of treatment process or equipment to detect erosion or obvious signs of leakage? ___Yes ___No
 - (2) Construction materials of an area immediately surrounding discharge confinement structures? ___Yes ___No
6. Does the facility have a closure plan? ___Yes ___No
7. Where is the plan maintained? _____
8. Are ignitable or reactive wastes placed in the treatment process (circle appropriate waste). ___Yes ___No
- a. If yes, is the waste treated, rendered or mixed before or immediately after being placed in the treatment process so it no longer meets the definition of ignitable or reactive? Describe or attach a copy of the treatment. ___Yes ___No
9. Has the facility treated incompatible wastes? ___Yes ___No
- a. If yes, what were the results. Use narrative explanations sheet. Look for signs of mixing of incompatible wastes (e.g., fire, toxic mist, heat generation, etc.)
10. If a waste is to be placed in treatment equipment that previously held an incompatible waste, was that equipment washed? ___Yes ___No
- a. If yes, describe washing procedures. Use narrative explanations sheet.
- Describe how it is possible for incompatible wastes to be placed in the same treating equipment. Use narrative explanations sheet.

Table F-14
RCRA CHECKLIST FOR RECYCLING WASTES
TO BE BURNED FOR ENERGY RECOVERY

Name of Facility: _____

Address: _____

EPA I.D. Number _____

Facility Inspection Representative: _____

Title: _____

Telephone Number: _____

These are questions pertaining to facilities that recycle wastes to be burned for energy recovery (Marketers and Burners).

Note: Regarding generators and waste as fuel standards. Generators of used oil or hazardous waste are subject to the waste as fuel marketer standards if they sell waste fuels directly to burners for energy recovery. Generators are subject to the burner standards if they burn used oil or hazardous waste for energy recovery.

1. Does the facility receive used oils or hazardous waste for the purpose of marketing waste as fuel for energy recovery? ___ Yes ___ No

If yes, complete the marketer checklist of Section A.

2. Does the facility burn its waste as fuel for energy recovery? ___ Yes ___ No

If yes, complete the burner checklist of Section B.

SECTION A - MARKETERS/PROCESSORS OF WASTE FUELS

Site Characterization

1. Does the facility accept waste oil? ___ Yes ___ No

Specify types and source: _____

2. Does the facility blend hazardous waste with waste oil to be marketed as fuel? ___ Yes ___ No

Table F-14 (cont.)

3. Does the facility accept hazardous waste fuel (i.e., used oil previously blended with hazardous waste)? ☐ Yes ☐ No
4. Does the facility accept hazardous waste? ☐ Yes ☐ No
- Specify waste and generator type: _____
-
5. Does the facility accept only used oil? ☐ Yes ☐ No
6. Does the facility have Interim Status or a permit (RCRA §3005)? ☐ Yes ☐ No
- Specify: _____
7. Does the facility generate hazardous waste? ☐ Yes ☐ No
- If yes, refer to the generator checklist, also.
8. Inspect the following general operating practices:
- | <u>Storage</u> | <u>Treatment</u> | <u>Disposal</u> |
|--|--|--|
| <input type="checkbox"/> Drum | <input type="checkbox"/> Settling | <input type="checkbox"/> Landfill |
| <input type="checkbox"/> Above-ground tanks(s) | <input type="checkbox"/> Heat addition | <input type="checkbox"/> Land Treatment |
| <input type="checkbox"/> Underground tank(s) | <input type="checkbox"/> In-Line Filtering | <input type="checkbox"/> Surface Impoundment |
| <input type="checkbox"/> Other | <input type="checkbox"/> Centrifugation | |
| <input type="checkbox"/> Tank sizes | <input type="checkbox"/> Screen Filtration | <input type="checkbox"/> Other |
| _____ | <input type="checkbox"/> Dehydration | |
| _____ | <input type="checkbox"/> Emulsion Breaking | |
| | <input type="checkbox"/> Blending | |
- Descriptions and Observations: _____
-
9. Specify other material recycled as fuel. _____
-
10. Has the facility notified the Agency of their waste fuel activity [§266.34(b), or §266.43(b)(3)]? ☐ Yes ☐ No

Table F-14 (cont.)

If no, explain: _____

11. Does the facility have manifests for all shipments of hazardous waste and blended hazardous waste fuel (received or sent) (§265.70)? ___ Yes ___ No

Review manifests and obtain copies of deficient documents.

12. Does the facility have a copy of the required notice from burners or marketers to whom waste fuel is marketed [§266.34(e) or §266.43(b)(5)]? ___ Yes ___ No

13. Does the facility have invoice information for shipments of used oil claimed to be specification used oil fuel [§266.43(b)(6)]? ___ Yes ___ No

14. Does the above invoice information for specification used oil fuel have a cross-reference to analysis or other information? ___ Yes ___ No

15. Does the facility analyze for metals and halogens? ___ Yes ___ No

Specify methods: _____

16. Does the facility have records of analysis or other information documenting that the used oil meets the specification? ___ Yes ___ No

17. Does the facility have the records required under §266.34(f) or §266.43(b)(6)? ___ Yes ___ No

Comments: _____

Note: If a facility markets hazardous waste fuel, the facility is subject to storage requirements of Parts 262, 264 or 265 and 270, Subparts A through L. Complete the TSDF checklist.

SECTION B - BURNERS OF USED OIL FUEL AND HAZARDOUS WASTE FUEL

The following questions pertain to facilities regulated under Part 266 who burn waste fuel for energy recovery. These do not necessarily apply to incineration under Subpart O of Part 265.

Table F-14 (cont.)

1.	Does the facility burn used oil fuel?	___Yes ___No
	Specify: Off-specification___ Specification___	
2.	Does the facility burn hazardous waste fuel?	___Yes ___No
	If yes, was the facility in existence before May 29, 1986?*	___Yes ___No
3.	Does the facility's burning unit(s) classify as industrial boiler(s) or industrial furnace(s)?	___Yes ___No
	If no, does the facility have records of analysis or other information documenting that the used oil meets the required specifications [§266.44(b)]?	___Yes ___No
4.	Has the owner/operator notified EPA of their waste fuel activity [§266.35(b) or §266.44(b)]?	___Yes ___No
5.	Does the facility have records of the <u>required notices</u> sent to the fuel suppliers (marketers) for hazardous waste fuel or off-specification used oil [§266.35(d) or §266.44(c)]?	___Yes ___No
6.	Does the facility have Interim Status or a permit (§3005)?	___Yes ___No
	Comments: _____	

* Storage requirements for hazardous waste fuel under Subparts A through L, Parts 262, 264 or 265 and 260 apply to these facilities as of May 29, 1986. Therefore, refer to the checklist for inspection of TSDF.

Table F-15
LAND DISPOSAL RESTRICTION
F-SOLVENT GENERATOR CHECKLIST

I. HANDLER IDENTIFICATION

A. Handler Name

B. Street (or other identifier)

C. City

D. State

E. Zip Code

F. County Name

G. Nature of Business; Identification of Operations

H. EPA ID #

I. Handler Contact (Name and Phone Number)

II. GENERATOR COMPLIANCEA. F-Solvent Identification

1. Does the handler generate the following wastes?

a. F001 ☐ Yes ☐ No
 b. F002 ☐ Yes ☐ No
 c. F003 ☐ Yes ☐ No

If an F003 wastestream listed solely for ignit-
 ability has been mixed with a nonrestricted
 solid or nonlisted hazardous waste, does the
 resultant mixture exhibit a hazardous
 characteristic? ☐ Yes ☐ No

d. F004 ☐ Yes ☐ No
 e. F005 ☐ Yes ☐ No

2. Source of the above: Form 8700-12 _____; Part A _____;
 Part B _____; other (specify) _____

Table F-19 is intended to assist the inspector and enforcement official in
 determining whether the facility is generating F-solvent wastes, if such
 wastes were not identified by the facility previously. If you are concerned
 that F-solvent wastes may be misclassified or mislabeled, complete Table F-
 Note concerns below: _____

Table F-15 (cont.)

B. BDAT Treatability Group - Treatment Standards Identification

1. Did the generator correctly determine the appropriate treatability group (§268.41) of the waste (wastewaters containing solvents, pharmaceutical wastewaters containing spent methylene chloride, all other spent solvent wastes)? ___ Yes ___ No

C. Waste Analysis

1. Did the generator determine whether the waste exceeds treatment standards based on §268.7(a):
- a. Knowledge of wastes ___ Yes ___ No
- b. TCLP ___ Yes ___ No
- c. Other (specify) _____

If knowledge, note how this is adequate:

If determined by TCLP, provide date of last test, frequency of testing and attach test results.

Dates/frequency: _____

Note any problems: _____

- d. Were wastes tested using TCLP when a process or wastestream changes? ___ Yes ___ No
2. Did the F-solvent wastes exceed applicable treatability group treatment standards upon generation [§268.7(a)(1)]? ___ Yes ___ No
___ Some
3. Did the generator dilute the waste or the treatment residual so as to substitute for adequate treatment (§268.3) ___ Yes ___ No

Table F-15 (cont.)

D. Management

1. Onsite management

- a. Were F-solvent wastes managed onsite? ☐ Yes ☐ No

If no, proceed to question 2.

- b. For wastes that exceed treatment standards, was treatment, storage and/or disposal conducted? ☐ Yes ☐ No

If yes, complete Land Disposal Restriction F-Solvent TSD Requirements Checklist.

- c. Are test results maintained in the operating record? ☐ Yes ☐ No

2. Offsite Management

- a. If F-solvent wastes exceed treatment standards, did generator provide treatment facility [§268.7(a)(1)]:

(1) EPA waste number? ☐ Yes ☐ No

(2) Applicable treatment standard? ☐ Yes ☐ No

(3) Manifest number ☐ Yes ☐ No

(4) Waste analysis date, if available? ☐ Yes ☐ No

Identify offsite treatment facilities _____

- b. If F-solvent wastes do not exceed treatment standards, did generator provide the disposal facility [§268.7(a)(2)]:

(1) EPA hazardous waste number? ☐ Yes ☐ No

(2) Applicable treatment standard? ☐ Yes ☐ No

(3) Manifest number? ☐ Yes ☐ No

(4) Waste analysis data, if available? ☐ Yes ☐ No

(5) Certification regarding waste and that it meets treatment standards? ☐ Yes ☐ No

Table F-15 (cont.)

Identify land disposal facilities receiving the BDAT certified wastes

c. If waste is subject to nation-wide variance (e.g., solvent-water mixtures less than 1%), extension (268.5) or petition (268.6) does generator provide notice to disposer that wastes is exempt from land disposal restrictions [§268.7(a)(3)]? ___ Yes ___ No

E. Storage of F-Solvent Waste

1. Did facility store restricted wastes exceeding treatment standards? ___ Yes ___ No

If yes, were the wastes stored solely for the purpose of facilitating proper recovery, treatment or disposal? ___ Yes ___ No

2. Are all containers clearly marked to identify content and date(s) entering storage? ___ Yes ___ No

3. Was F-solvent waste stored for greater than 90 days (after variance, 180/270 days for SQG)? ___ Yes ___ No

If yes, was facility operating as a TSDF under interim status or final permit? ___ Yes ___ No

If yes, complete Tab F-17 for TSDFs.

F. Treatment Using RCRA 264/265 Exempt Units or Processes
(i.e., boilers, furnaces, distillation units, wastewater treatment tanks, etc.)

1. Were treatment residuals generated from RCRA 264/265 exempt units or processes? ___ Yes ___ No

If yes, list type of treatment unit and processes _____

In most cases, if the residuals from a RCRA-exempt treatment unit are above the treatment standards, the owner/operator is considered a generator of restricted waste. The inspector should determine whether the generator requirements, particularly waste identification requirements, have been met for the treatment residuals.

Table F-15 (cont.)

If the residuals from a RCRA-exempt treatment unit are above the treatment standards, the owner/operator is considered a generator of restricted waste. The inspector should determine whether the generator requirements, particularly waste identification requirements, have been met for the treatment residuals.

Table F-16
LAND DISPOSAL RESTRICTION F-SOLVENT TRANSPORTER CHECKLIST

I. FACILITY IDENTIFICATION

A. Site Name

B. Street (or other identifier)

C. City

D. State

E. Zip Code

F. County Name

G. Description of Operations

H. EPA ID #

I. Facility Contact (Name and Phone Number)

II. TRANSPORTER REQUIREMENTS

A. Does the transporter store restricted wastes for greater than 10 days [268.50(a)(3)]? ___ Yes ___ No

1. If yes, does transporters have 264/265 status as storage facility (e.g., has submitted part A) ___ Yes ___ No

B. Does a review of records indicate storage of restricted wastes for greater than 10 days? ___ Yes ___ No

C. Describe inventory controls to ensure that restricted wastes are not stored for greater than 10 days. _____

Table F-17
 LAND DISPOSAL RESTRICTION F-SOLVENT TREATMENT,
 STORAGE AND DISPOSAL REQUIREMENTS CHECKLIST

I. FACILITY IDENTIFICATION

 A. Facility Name

 B. Street (or other identifier)

 C. City

 D. State

 E. Zip Code

 F. County Name

 G. Nature of business; identification of operations

 H. EPA ID #

I. Facility Contact (Name and Phone Number)

For onsite facilities, complete the generator checklist

II.

A. General Facility Standards

1. Was waste analysis plan revised to cover
 Part 268 requirements [§264.13 or 265.13]? ☐ Yes ☐ No

2. Did facility obtain representative chemical
 and physical analysis of wastes and residues? ☐ Yes ☐ No

a. Did testing include analyses for all F001-
 F005 constituents? ☐ Yes ☐ No

b. Were analyses performed using TCLP? ☐ Yes ☐ No

c. Were analyses conducted onsite or off-
 site (identify offsite lab)? ☐ On ☐ Off

d. Describe frequency of sampling _____

Table F-17 (cont.)

e. Describe procedures used to identify manifest discrepancies _____

3. Are the operating records, including analyses and quantities, complete (264.73/265.73)? ☐ Yes ☐ No

B. Storage (§268.50)

1. Were restricted wastes exceeding treatment standards stored? ☐ Yes ☐ No

2. Are all containers clearly marked to identify content and date(s) entering storage? ☐ Yes ☐ No

3. Do operating records track the location, quantity and dates the restricted wastes exceeding treatment standards entered and were removed from storage? ☐ Yes ☐ No

4. Do operating records agree with container labeling? ☐ Yes ☐ No

5. Is waste exceeding treatment standards stored for less than 1 year? ☐ Yes ☐ No

If yes, can you show that such accumulation is not necessary to facilitate proper recovery, treatment or disposal? ☐ Yes ☐ No

If yes, state how: _____

6. Were tanks emptied at least once per year and do operating records show that volume of waste removed from tanks annually at least equals tank volume? ☐ Yes ☐ No

7. Was/is waste exceeding treatment standards stored for more than 1 year? ☐ Yes ☐ No

If yes, state the owner/operator's proof that such storage was solely for the purposes of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal: _____

Table F-17 (cont.)

8. Are F-solvent wastes exceeding treatment standards placed in surface impoundments for treatment? ___Yes ___No
- C. Treatment in Surface Impoundments (§268.4)
1. Were F001-F005 wastes exceeding treatment standards placed in surface impoundments for treatment? ___Yes ___No
- If no, go on to D.
2. Did the facility submit a certification of compliance with minimum technology and groundwater monitoring requirements and the waste analysis plan to the Agency? ___Yes ___No
3. Have the minimum technology requirements been met? ___Yes ___No
- a. If the minimum technology requirements have not been met, has a waiver/exemption been granted for that unit(s)? ___Yes ___No
4. Have the Subpart F groundwater monitoring requirements been met? ___Yes ___No
5. Have representative samples of the sludge and supernatant from the surface impoundment been tested separately, acceptably and in accordance with the sampling frequency and analysis specified in the waste analysis plan and are the results in the operating record? ___Yes ___No
6. Did the hazardous waste residue (sludge or liquid) exceed the treatment standards specified in §268.41? ___Yes ___No
7. Provide the frequency of analyses conducted on treatment residues: _____

8. Does the operating record adequately document the results of waste analyses performed in accordance with §268.41? ___Yes ___No

Table F-17 (cont.)

9. Have the hazardous waste residues that exceed the treatment standards (§268.41) been removed adequately and on an annual basis? ___ Yes ___ No
- a. If no and supernatant is determined to exceed treatment concentrations, is annual throughput greater than impoundment volume? ___ Yes ___ No
10. If residues were removed annually, were adequate precautions taken to protect liners and do records indicate that inspections of liner integrity are performed? ___ Yes ___ No
11. When removed, were solvent wastes managed subsequently in another surface impoundment? ___ Yes ___ No
12. When removed, were wastes treated prior to disposal? ___ Yes ___ No
- a. If yes, are waste residues treated on or offsite? ___ Onsite ___ Offsite
- b. Identify management method _____

D. Treatment

1. Did the facility operate treatment facilities for F-solvent waste (not including surface impoundment)? ___ Yes ___ No

If no, proceed to "F."

2. Describe the treatment processes for F-solvent wastes:

Table F-17 (cont.)

3. Does the facility, in accordance with an acceptable waste analysis plan, verify that the residue extract from all treatment processes for the F-solvent wastes are less than treatment standards [§268.7(b)(2)]? ☐ Yes ☐ No
4. Describe frequency of testing of treatment residuals:
- _____
- _____
- _____
- _____
5. Was dilution used as a substitute for treatment? ☐ Yes ☐ No
6. Are certifications and results of waste analyses kept in the operating record? ☐ Yes ☐ No
7. Are notices with waste number, treatment standard, manifest number and analytical data (where available) submitted for each shipment of waste or treatment residual that meets the treatment standard stating that waste has been treated to treatment performance standards [§268.7(b)]? ☐ Yes ☐ No
8. Are certifications submitted for each shipment [§268.7(b)(2)(i)]? ☐ Yes ☐ No
- E. Land Disposal
1. Were F-solvent wastes placed in land disposal units [landfills, surface impoundments (for this question, do not include if in "D")] waste piles, wells, land treatment units, salt domes/beds, mines/caves concrete vault or bunker? ☐ Yes ☐ No
2. Did facility have the notice and certification from generators/treaters in its operating record [§§268.7(c); 268.7(a), (b)]? ☐ Yes ☐ No
3. Did the facility obtain waste analysis data through testing of the waste to determine that the wastes are in compliance with the applicable treatment standards [§268.7(c)]? ☐ Yes ☐ No

Table F-17 (cont.)

If yes, at what frequency? _____

-
4. Were F-solvent wastes exceeding the treatment standards placed in land disposal units [268.30] excluding national capacity variances [268.30(a)]? ___ Yes ___ No
- If yes, did facility have an approved waiver based on no migration petition [268.6] or approved case-by-case capacity extension [268.5] or variance [268.44]? ___ Yes ___ No
5. Were F-solvent wastes subject to a national or case-by-case capacity variance/extension disposed? ___ Yes ___ No
- a. If yes, were these wastes disposed of in a facility that has a new, replacement or laterally expanded landfill or impoundment? ___ Yes ___ No
- If (a) is yes, have the minimum technology requirements been met for all such units at the facility? ___ Yes ___ No
6. Were adequate records of disposal maintained? ___ Yes ___ No
7. If wastes subject to a nationwide variance, case-by-case extensions [268.5], or no migration petitions [268.6] were disposed, does facility have notices [268.7(a)(3)] and records of disposal? ___ Yes ___ No
8. What is the volume of F-solvent waste disposed to date by waste? _____
- _____
- _____
9. If the facility has a case-by-case extension, can the inspector verify that the facility is making progress as described in progress reports? ___ Yes ___ No

Table F-18
SOLVENT IDENTIFICATION CHECKLIST

1. Does the handler generate any of the following constituents (i.e., spent halogenated solvents used in degreasing) as a result of being used in the process either in pure form or commercial grade?

Tetrachloroethylene	Yes	No
Trichloroethylene	Yes	No
Methylene chloride	Yes	No
1,1,1-Trichloroethane	Yes	No
Carbon tetrachloride	Yes	No
Chlorinated fluorocarbons	Yes	No

2. Does the handler generate any of the following F002 constituents (i.e., spent halogenated solvents) as a result of being used in the process either in pure form or commercial grade?

Tetrachloroethylene	Yes	No
Trichloroethylene	Yes	No
Methylene chloride	Yes	No
1,1,1-trichloroethane	Yes	No
Chlorobenzene	Yes	No
Trichlorofluoromethane	Yes	No
1,1,2-trichloro-1,2,2-trifluoroethane	Yes	No
Ortho-dichlorobenzene	Yes	No
1,1,2-trichloroethane	Yes	No

3. Does the handler generate any of the following F003 constituents (i.e., spent nonhalogenated solvents) as a result of being used in the process either in pure form or commercial grade?

Xylene	Yes	No
Acetone	Yes	No
Ethyl acetate	Yes	No
Ethyl benzene	Yes	No
Ethyl ether	Yes	No
Methyl isobutyl ketone	Yes	No
n-Butyl alcohol	Yes	No
Cyclohexane	Yes	No
Methanol	Yes	No

If the F003 wastestream has been mixed with a non-restricted solid or nonlisted hazardous waste, does the resultant mixture exhibit the ignitability characteristic?

Yes No

4. Does the handler generate any of the following F004 constituents (i.e., spent nonhalogenated solvents) as a result of being used in the process either in pure form or commercial grade?

Table F-18 (cont.)

Cresols and cresylic acid	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Nitrobenzene	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Does the handler generate any of the following F005 constituents (i.e., spent nonhalogenated solvents) as a result of being used in the process either in pure form or commercial grade?		
Toluene	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Methyl ethyl ketone	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Carbon disulfide	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Isobutanol	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Pyridine	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Are any of the constituents listed in the questions 1 through 5 used for their "solvent" properties -- that is to solubilize (dissolve) or mobilize other constituents? The following questions will be helpful in confirming this determination.		
a. Chemical carriers?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If the answer is yes, list the constituents.		
<hr/>		
<hr/>		
b. Degreasing/cleaning?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<hr/>		
<hr/>		
c. Diluents?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<hr/>		
<hr/>		
d. Extractants	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If the answer is yes, list the constituents.		
<hr/>		
<hr/>		
e. Fabric scouring?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If the answer is yes, list the constituents.		
<hr/>		
<hr/>		

Table F-18 (cont.)

f. Reaction and synthesis media? ___ Yes ___ No

If the answer is yes, list the constituents.

If questions 1 through 6 led the inspector to believe that the waste may be an F-solvent, answer question 7.

7. Are any of the above constituents spent solvents?
A solvent is considered "spent" when it has been used and is no longer used without being regenerated, reclaimed or otherwise reprocessed. ___ Yes ___ No
8. If the waste is a mixture of constituents, as determined in questions 1 through 6, answer this to determine whether it is a "solvent mixture" covered by the listings.

If the wastestream is mixed and contains more than one of the F001 to F005 constituents listed in questions 1 through 5 (by volume), give the concentration before use of all the constituents in the solvent mixture/blend. For example:

5% methylene chloride
2% trichloroethylene
25% 1,1,1-trichloroethane
68% mineral spirits
100%

If the wastestream is a mixture containing a total of 10% or more (by volume) of one or more of the F001, F002, F004 or F005 listed constituents before use, it is a listed waste.

With respect to the F003 solvent wastes, if, before use, the wastestream is mixed and contains only F003 constituents, it is a listed waste. For example:

33% acetone
16% methanol
51% ethyl ether
100%

If the wastestream is a mixture containing F003 constituents and a total of 10% or more of one or more of the F001, F002, F004 and F005 listed constituents before use, it is a listed waste. For example:

Table F-18 (cont.)

50% xylene	F003
12% TCE	F001
<u>38% mineral spirits</u>	
100%	

If, in light of the above, the handler appears to be generating F001 to F005 hazardous wastes, refer this facility to the enforcement official for followup actions verifying the use of solvents at the facility.

Table F-19
TREATMENT STANDARDS FOR F-SOLVENTS

F001-F005 Spent Solvents	Concentration (in Mg/L)	
	Wastewaters	Other Wastes
Acetone	0.05	0.59
N-butyl alcohol	5.0	5.0
Carbon disulfide	1.05	4.81
Carbon tetrachloride	.05	.96
Chlorobenzene	.15	.05
Cresols (and cresylic acid)	2.82	.75
Cyclohexanone	.125	.75
1,2-dichlorobenzene	.65	.125
Ethyl acetate	.05	.75
Ethyl benzene	.05	.053
Ethyl ether	.05	.75
Isobutanol	5.0	5.0
Methanol	.25	.75
Methylene chloride	.20	.96
Methylene chloride (from the pharmaceutical industry)	12.7	.96
Methyl ethyl ketone	0.05	0.75
Methyl isobutyl ketone	0.05	0.33
Nitrobenzene	0.66	0.125
Pyridine	1.12	0.33
Tetrachloroethylene	0.079	0.05
Toluene	1.12	0.33
1,1,1-Trichloroethane	1.05	0.41
1,2,2-Trichloro 1,2,2-trifluoroethane	1.05	0.96
Trichloroethylene	0.062	0.091
Trichlorofluoromethane	0.05	0.96
Xylene	0.05	0.15

APPENDIX G
CERCLA CHECKLIST

Appendix G
CERCLA CHECKLIST

1. Notification

- a. Has the facility notified the proper regulatory authorities concerning sites of past hazardous substance releases and former hazardous substance storage, treatment and disposal areas [CERCLA 103(a) and (c)]? Yes ____ No ____

- b. What sites have been listed in any notification?

2. Unreported Sites

- a. Are there indications of other sites at the facility which may be appropriate for notification (from records review, interviews, evidence of spills, aerial photographs, etc.)? Yes ____ No ____

- b. List any potentially contaminated sites which have not been reported.

3. Is this a Department of Defense (DOD) facility? Yes ____ No ____
(If so, go to question 5)

4. Non-DOD facilities

- a. Has the facility (non-DOD) participated in any response actions (40 CFR 300.25)? Yes ____ No ____

- b. What is the facility's participation?

Appendix G (cont.)

- c. What is the status of any response by regulatory agencies?

5. DOD Facility Sites:

- a. (1) Has the preliminary assessment (40 CFR 300.64) been completed? Yes ____ No ____

- (2) Was the preliminary assessment adequate? Yes ____ No ____

- (3) Findings and status:

- b. (1) Were immediate removals (40 CFR 300.65) conducted at any of the sites? Yes ____ No ____

- (2) Was the removal adequate (verification data)? Yes ____ No ____

- (3) Findings and status:

- c. (1) Has there been an evaluation and determination of appropriate response for a planned removal and remedial action (40 CFR 300.66)? Yes ____ No ____

- (2) Was this evaluation and determination adequate? Yes ____ No ____

- (3) Status:

Appendix G (cont.)

- d. (1) Was a planned removal or remedial action
(40 CFR 300.67 and 68) taken? Yes ____ No ____
- (2) Was this planned removal or remedial action
successful? Yes ____ No ____
- (3) Status:

6. Comments:

APPENDIX H

TSCA CONFIDENTIAL BUSINESS INFORMATION PROCEDURES AND FORMS

Appendix H


CONFIDENTIALITY NOTES AND DISCUSSIONS


The TSCA Notice of Inspection [Figure I-1] and Inspection Confidentiality Notice [Figure I-2] are presented to the facility owner or agent in charge during the opening conference. These notices inform facility officials of their right to claim as confidential business information any information (documents, physical samples or other material) collected by the inspector.

Authority to Make Confidentiality Claims

The inspector must ascertain whether the facility official to whom the notice were given has the authority to make business confidentiality claims for the company. The facility official's signature must be obtained at the appropriate places on the notices certifying that he does or does not have such authority.

- The facility owner is assumed to always have the authority to make business confidentiality claims. In most cases, it is expected that the agent in charge will also have such authority. It is possible that the officials will want to consult with their attorneys (or superiors in the case of agents in charge) regarding this issue.
- If no one at the site has the authority to make business confidentiality claims, a copy of the TSCA Inspection Confidentiality Notice and Notice and Declaration of Confidential Business Information form [Figure I-3] are to be sent to the chief executive officer of the firm within 2 days of the inspection. He will then have 7 calendar days in which to make confidentiality claims.
- The facility official may designate a company official, in addition to the chief executive officer, who should also receive a copy of the notices and any accompanying forms.

		US ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 TOXIC SUBSTANCES CONTROL ACT NOTICE OF INSPECTION		Form Approved OMB No. 2070-0007 Expires 3-31-88	
1. INVESTIGATION IDENTIFICATION			2. TIME	3. FIRM NAME	
DATE	INSPECTOR NO.	DAILY SEQ. NO.			
4. INSPECTOR ADDRESS				5. FIRM ADDRESS	
REASON FOR INSPECTION Under the authority of Section 11 of the Toxic Substances Control Act :					
<input type="checkbox"/> For the purpose of inspecting (including taking samples, photographs, statements, and other inspection activities) an establishment, facility, or other premises in which chemical substances or mixtures or articles containing same are manufactured, processed or stored, or held before or after their distribution in commerce (including records, files, papers, processes, controls, and facilities) and any conveyance being used to transport chemical substances, mixtures, or articles containing same in connection with their distribution in commerce (including records, files, papers, processes, controls, and facilities) bearing on whether the requirements of the Act applicable to the chemical substances, mixtures, or articles within or associated with such premises or conveyance have been complied with.					
<input type="checkbox"/> In addition, this inspection extends to <i>(Check appropriate blocks)</i> :					
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> A. Financial data </div> <div> <input type="checkbox"/> D. Personnel data </div> </div>					
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> B. Sales data </div> <div> <input type="checkbox"/> E. Research data </div> </div>					
<input type="checkbox"/> C. Pricing data					
The nature and extent of inspection of such data specified in A through E above is as follows:					
INSPECTOR SIGNATURE			RECIPIENT SIGNATURE		
NAME			NAME		
TITLE	DATE SIGNED	TITLE		DATE SIGNED	

 <div style="display: inline-block; vertical-align: middle; text-align: center;"> US ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 TOXIC SUBSTANCES CONTROL ACT TSCA INSPECTION CONFIDENTIALITY NOTICE </div>		<i>Form Approved</i> <i>OMB No. 2070-0007</i> <i>Expires 3-31-88</i>			
1. INVESTIGATION IDENTIFICATION <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 2px;">DATE</td> <td style="width: 30%; padding: 2px;">INSPECTOR NO.</td> <td style="width: 50%; padding: 2px;">DAILY SEQ. NO.</td> </tr> </table>		DATE	INSPECTOR NO.	DAILY SEQ. NO.	2. FIRM NAME
DATE	INSPECTOR NO.	DAILY SEQ. NO.			
3. INSPECTOR NAME 		4. FIRM ADDRESS 			
5. INSPECTOR ADDRESS 					
		6. CHIEF EXECUTIVE OFFICER NAME 			
		7. TITLE 			

TO ASSERT A CONFIDENTIAL BUSINESS INFORMATION CLAIM

It is possible that EPA will receive public requests for release of the information obtained during inspection of the facility above. Such requests will be handled by EPA in accordance with provisions of the Freedom of Information Act (FOIA), 5 USC 552; EPA regulations issued thereunder, 40 CFR Part 2; and the Toxic Substances Control Act (TSCA), Section 14. EPA is required to make inspection data available in response to FOIA requests unless the Administrator of the Agency determines that the data contain information entitled to confidential treatment or may be withheld from release under other exceptions of FOIA.

Any or all the information collected by EPA during the inspection may be claimed confidential if it relates to trade secrets or commercial or financial matters that you consider to be confidential business information. If you assert a CBI claim, EPA will disclose the information only to the extent, and by means of the procedures set forth in the regulations (cited above) governing EPA's treatment of confidential business information. Among other things, the regulations require that EPA notify you in advance of publicly disclosing any information you have claimed as confidential business information.

A confidential business information (CBI) claim may be asserted at any time. You may assert a CBI claim prior to, during, or after the information is collected. The declaration form was developed by the Agency to assist you in asserting a CBI claim. If it is more convenient for you to assert a CBI claim on your own stationery or by marking the individual documents or samples "TSCA confidential business information," it is not necessary for you to use this form. The inspector will be glad to answer any questions you may have regarding the Agency's CBI procedures.

While you may claim any collected information or sample as confidential business information, such claims are unlikely to be upheld if they are challenged unless the information meets the following criteria:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.

2. The information is not, and has not been, reasonably obtainable without your company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery, based on showing of special need in a judicial or quasi-judicial proceeding).
3. The information is not publicly available elsewhere.
4. Disclosure of the information would cause substantial harm to your company's competitive position.


At the completion of the inspection, you will be given a receipt for all documents, samples, and other materials collected. At that time, you may make claims that some or all of the information is confidential business information.

If you are not authorized by your company to assert a CBI claim, this notice will be sent by certified mail, along with the receipt for documents, samples, and other materials to the Chief Executive Officer of your firm within 2 days of this date. The Chief Executive Officer must return a statement specifying any information which should receive confidential treatment.

The statement from the Chief Executive Officer should be addressed to:

and mailed by registered, return-receipt requested mail within 7 calendar days of receipt of this Notice. Claims may be made any time after the inspection, but inspection data will not be entered into the special security system for TSCA confidential business information until an official confidentiality claim is made. The data will be handled under the agency's routine security system unless and until a claim is made.

TO BE COMPLETED BY FACILITY OFFICIAL RECEIVING THIS NOTICE: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> I have received and read the notice </div>		If there is no one on the premises of the facility who is authorized to make business confidentiality claims for the firm, a copy of this Notice and other inspection materials will be sent to the company's chief executive officer. If there is another company official who should also receive this information, please designate below.
SIGNATURE 	NAME 	
NAME 	TITLE 	
TITLE 	DATE SIGNED 	ADDRESS

 <div style="display: inline-block; vertical-align: middle; text-align: center;"> US ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 TOXIC SUBSTANCES CONTROL ACT </div>		<i>Form Approved</i> <i>OMB No. 2070-0007</i> <i>Expires 3-31-88</i>	
DECLARATION OF CONFIDENTIAL BUSINESS INFORMATION			
1. INVESTIGATION IDENTIFICATION			2. FIRM NAME
DATE	INSPECTOR NO.	DAILY SEQ. NO.	
3. INSPECTOR ADDRESS			4. FIRM ADDRESS
INFORMATION DESIGNATED AS CONFIDENTIAL BUSINESS INFORMATION			
NO.	DESCRIPTION		
ACKNOWLEDGEMENT BY CLAIMANT			
<p>The undersigned acknowledges that the information described above is designated as Confidential Business Information under Section 14(c) of the Toxic Substances Control Act. The undersigned further acknowledges that he/she is authorized to make such claims for his/her firm.</p> <p>The undersigned understands that challenges to confidentiality claims may be made, and that claims are not likely to be upheld unless the information meets the following guidelines: (1) The company has taken measures to protect the confidentiality of the information and it intends to continue to take such measures; (2) The information is not, and has not been reasonably attainable without the company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding); (3) The information is not publicly available elsewhere; and (4) Disclosure of the information would cause substantial harm to the company's competitive position.</p>			
INSPECTOR SIGNATURE		CLAIMANT SIGNATURE	
NAME		NAME	
TITLE	DATE SIGNED	TITLE	DATE SIGNED

Appendix H (cont.)

Confidentiality Discussion


Officials should be informed of the procedures and requirements that EPA must follow in handling TSCA confidential business information. The inspector should explain that these procedures were established to protect the companies subject to TSCA and cover the following points during the discussion.

- Data may be claimed confidential business information during the closing conference if a person authorized to make such claims is onsite at the facility.
- It is suggested that a company official accompany the inspector during the inspection to facilitate designation (or avoidance, if possible) of confidential business data.
- A detailed receipt for all documents, photographs, physical samples, and other materials [Figure I-4] collected during the inspection will be issued at the closing conference.
- An authorized person may make immediate declarations that some or all of the information is confidential business information. This is done by completing the Declaration of Confidential Business Information form. Each item claimed must meet all four of the criteria shown on the TSCA Inspection Confidentiality Notice.
- If no authorized person is available onsite, a copy of the notices, along with the Receipt for Samples and Documents, will be sent by certified, return-receipt-requested mail to the Chief Executive Officer of the firm and to another company official, if one has been designated.

Four copies are made of the Declaration of Confidential Information form and distributed to:

Appendix H (cont.)

- Facility owner or agent in charge
- Other company official (if designated)
- Document Control Officer
- Inspection report

 <div style="display: inline-block; vertical-align: middle; text-align: center;"> US ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 TOXIC SUBSTANCES CONTROL ACT RECEIPT FOR SAMPLES AND DOCUMENTS </div>		Form Approved. OMB No. 2070-0007 Approval expires 3-31-88
1. INVESTIGATION IDENTIFICATION		2. FIRM NAME
DATE	INSPECTOR NO.	DAILY SEQ. NO.
3. INSPECTOR ADDRESS		4. FIRM ADDRESS
The documents and samples of chemical substances and/or mixtures described below were collected in connection with the administration and enforcement of the Toxic Substances Control Act.		
RECEIPT OF THE DOCUMENT(S) AND/OR SAMPLE(S) DESCRIBED IS HEREBY ACKNOWLEDGED:		
NO.	DESCRIPTION	
OPTIONAL:		
DUPLICATE OR SPLIT SAMPLES: REQUESTED AND PROVIDED <input type="checkbox"/> NOT REQUESTED <input type="checkbox"/>		
INSPECTOR SIGNATURE		RECIPIENT SIGNATURE
NAME		NAME
TITLE	DATE SIGNED	TITLE
		DATE SIGNED

APPENDIX I
TSCA PCB CHECKLIST

Appendix I
PCB COMPLIANCE INSPECTION REPORT
(40 CFR Part 761)

SECTION A. FACILITY SUMMARY

Name and address of facility (include county, state and zip code)

(Responsible Official)

(Title)

(Phone)

(Facility Representative)

(Title)

(Phone)

Type of facility (utility, salvage yard, etc.)

SECTION B. INSPECTION/REVIEW

Inspected by:

(Signature)

(Agency and Date)

Reviewed by:

(Signature)

(Agency and Date)

COMMENTS:

[illegible]

Appendix I (cont.)

SECTION C. INVENTORY

1. As of July 2, 1978, did facility contain in-service, stored for future use, or disposal:
 - a. 50 or more large high- or low-voltage PCB capacitors? Yes___No___N/A___C/A___*
 - b. One or more PCB transformers? Yes___No___N/A___C/A___
 - c. 45 kgs (99.4 lbs.) or more PCB chemicals, substances or mixtures? Yes___No___N/A___C/A___
2. Disposition of PCB items at time of inspection:

Identify source of the above information (company records, manufacturer's labels, etc.)

* N/A - Not applicable
C/A - Comments attached

Appendix I (cont.)

If any PCB items are not properly marked, describe deficiencies below. Description must include information on amount of PCBs involved.

3. If company has PCB-contaminated transformers, explain how company determined the transformers contained 50 to 500 ppm PCB.

4. Does the facility have any other PCB items (electromagnets, hydraulic systems, etc.)? Yes___ No___ N/A___ C/A___

If yes, list number and type of item; whether it is in-service, storage, or sent to disposal; and if it is properly marked.

5. a. Were there observations of leaks or spills or any sign of improper disposal of PCB substances or mixtures. Yes___ No___ N/A___ C/A___

- b. If yes, document, sample and describe below. Description must include information on amount of PCBs involved.

6. a. Was there any indication that waterways in the vicinity have been contaminated by spills, leaks or improper disposal? Yes___ No___ N/A___ C/A___

- b. If yes, document, sample and describe below. Description must include information on the amount of PCBs involved and the name of the waterway.

Appendix I (cont.)

7. a. Were samples collected for analysis of PCB residual concentration? Yes ___ No ___ N/A ___ C/A ___

- b. If yes, describe below.

SECTION D. STORAGE AND HANDLING

1. Location:

- a. Does the facility have its own storage site for PCBs? Yes ___ No ___ N/A ___ C/A ___

- b. If the storage site is not within the boundary of the facility, give the site's name and address.

2. Does storage site meet physical requirements (761.42(a) - Physical Requirements) Yes ___ No ___ N/A ___ C/A ___

- a. Provide protection from rainfall? Yes ___ No ___ N/A ___ C/A ___

- b. Meet floor requirements with 6-inch continuous curbing? Yes ___ No ___ N/A ___ C/A ___

- c. Meet containment volume requirements? Yes ___ No ___ N/A ___ C/A ___

- (1) What is total containment volume of storage site?

 (Length x Width x Height)

- (2) What is the internal volume of the largest PCB article or container stored within the storage site?

- (3) What is the total internal volume of all PCB articles and containers within the storage site?

Is item 1 greater than two times item 2?

Yes ___ No ___ N/A ___ C/A ___

Appendix I (cont.)

or

25% of item 3?

Yes ___ No ___ N/A ___ C/A ___

- d. (1) Is the area within the curbed area void of drains, valves, expansion joints or other openings?

Yes ___ No ___ N/A ___ C/A ___

- (2) If no, document location of opening, drainage patch and ultimate disposal location in logbook and describe below.

- e. Is storage site located above the 100-year flood water elevation level?

Yes ___ No ___ N/A ___ C/A ___

- f. Are storage areas adequately marked?

Yes ___ No ___ N/A ___ C/A ___

- g. Any deficiencies in permanent storage facility must be documented with photographs and described below. Description must include amount of PCBs involved.

3. Containers:

- a. Are all PCB items which are located within storage areas dated [761.65(c)(8)]?

Yes ___ No ___ N/A ___ C/A ___

- b. Do PCB containers comply with DOT specifications except as noted in 3c and 3d below [761.65(c)(6)]?

Yes ___ No ___ N/A ___ C/A ___

- c. Are any non-liquid PCBs being stored in containers larger than those specified in DOT regulations [761.65(c)(6)]?

Yes ___ No ___ N/A ___ C/A ___

- (1) Do these containers provide as much protection and have the same strength as DOT containers?

Yes ___ No ___ N/A ___ C/A ___

Appendix I (cont.)

- d. Are any liquid PCBs being stored in containers larger than those specified in DOT regulations [761.42(c)(7)]? Yes___No___N/A___C/A___
- (1) Do containers comply with OSHA specifications? Yes___No___N/A___C/A___
- (2) Has SPCC plan been prepared and implemented? Yes___No___N/A___C/A___
4. Storage Site Operations:
- a. Are all PCB items arranged so they can be located by date? [761.65(c)(8)] Yes___No___N/A___C/A___
- b. Do observations indicate good house-keeping procedures? Yes___No___N/A___C/A___
- c. Is moveable equipment decontaminated by approved procedures? Yes___No___N/A___C/A___
- d. Are PCB items stored and handled in a manner that protects them from accidental breakage or damage? Yes___No___N/A___C/A___
5. Other Storage Areas:
- a. Are any of the following temporarily being stored outside the prescribed area: [761.65(c)(1)]
- (1) Nonleaking PCB articles and PCB equipment? Yes___No___N/A___C/A___
- Is date removed from service noted on the article or equipment? Yes___No___N/A___C/A___
- Have they been there fewer than 30 days? Yes___No___N/A___C/A___
- (2) Leaking PCB articles and PCB equipment placed in a non-leaking PCB containers? Yes___No___N/A___C/A___
- Is the date removed from service noted on the container? Yes___No___N/A___C/A___
- Have they been there fewer than 30 days? Yes___No___N/A___C/A___

Appendix I (cont.)

- (3) Containers of liquid PCBs at concentrations of 50 to 500 ppm? Yes ___ No ___ N/A ___ C/A ___
- Is SPCC plan available pertaining to temporary storage area? Yes ___ No ___ N/A ___ C/A ___
- Are containers marked to indicate the liquid does not exceed 500 ppm? Yes ___ No ___ N/A ___ C/A ___
- Is the date removed from service noted on the containers? Yes ___ No ___ N/A ___ C/A ___
- Have containers been there fewer than 30 days? Yes ___ No ___ N/A ___ C/A ___
- b. Are there any large high voltage capacitors or PCB contaminated transformers next to the storage site [761.65(c)(2)]? Yes ___ No ___ N/A ___ C/A ___
- Are they on pallets? Yes ___ No ___ N/A ___ C/A ___
- Is there adequate space within the storage site to contain 10% of the volume of these capacitors and transformers? Yes ___ No ___ N/A ___ C/A ___
- c. Any deficiencies in temporary storage must be documented with photographs and described below. Descriptions must include information on the amount of PCBs involved.
-
-

SECTION E. DECONTAMINATION

1. Does the facility drain or cleanse PCB transformers or other equipment containing PCB substances or mixtures prior to disposal or decontaminate movable equipment? Yes ___ No ___ N/A ___ C/A ___
2. Does the facility claim to have an exemption from incineration [761.60(e)] or exemptions under 761.80? Yes ___ No ___ N/A ___ C/A ___
3. Is the drainage and solvent filling site adequate to protect against spills and leaks and consequent contamination of surrounding areas and waterways? Yes ___ No ___ N/A ___ C/A ___

Appendix I (cont.)

4. Do solvents to be used for removing PCBs contain less than 50 ppm PCBs [761.79]? Yes ___ No ___ N/A ___ C/A ___
5. Was a sample of the solvent which was used for PCB removal obtained? Yes ___ No ___ N/A ___ C/A ___
6. Was the rinse volume of the dilutant approximately equal to 10% of the container's total volume [761.79(a)]? Yes ___ No ___ N/A ___ C/A ___
7. Are PCB transformers completely filled with solvent and allowed to stand for at least 18 hours before being drained [761.60(b)(1)]? Yes ___ No ___ N/A ___ C/A ___
8. Are the drained PCB chemical substances or PCB solvent mixtures properly disposed of or stored? Yes ___ No ___ N/A ___ C/A ___
9. Are solvents or materials which have been used for decontamination of PCB equipment disposed of or stored in the same manner as PCB mixtures? Yes ___ No ___ N/A ___ C/A ___
10. If decontamination procedures were not observed during inspection, did facility representative demonstrate knowledge of proper decontamination procedures? Yes ___ No ___ N/A ___ C/A ___
11. Does facility have written decontamination procedures? Yes ___ No ___ N/A ___ C/A ___
12. Any deficiencies in the decontamination procedures must be described below.

SECTION F. RECORDKEEPING

1. Do records indicate the date PCBs were:
 - a. Removed from service? Yes ___ No ___ N/A ___ C/A ___
 - b. Placed in storage for disposal? Yes ___ No ___ N/A ___ C/A ___
 - c. Placed in transport for disposal? Yes ___ No ___ N/A ___ C/A ___

Appendix I (cont.)

2. Do records indicate the quantity of the above items as follows:

- a. The weights of PCBs and PCB items in PCB containers? Yes___No___N/A___C/A___
- b. The identification of contents of PCB containers? Yes___No___N/A___C/A___
- c. The number of PCB transformers? Yes___No___N/A___C/A___
- d. The weight of PCBs in PCB transformers? Yes___No___N/A___C/A___
- e. The number of PCB large, high- and low-voltage capacitors? Yes___No___N/A___C/A___

3. Do records indicate the quantities of PCBs remaining in service broken down as follows:

- a. The weight of PCBs and PCB items in PCB containers? Yes___No___N/A___C/A___
- b. The identification of the contents in PCB containers? Yes___No___N/A___C/A___
- c. The number of PCB transformers? Yes___No___N/A___C/A___
- d. The weight of PCBs in PCB transformers? Yes___No___N/A___C/A___
- e. The number of PCB large, high- and low-voltage capacitors? Yes___No___N/A___C/A___

- 4. a. Is the information requested in paragraphs 1, 2 and 3 above compiled in an annual document? (This document must be prepared by July 1 and cover the previous calendar year.) Yes___No___N/A___C/A___
- b. List years for which annual documents are available.

5. Any deficiencies in recordkeeping must be described below including information on amount of PCBs involved.

Appendix I (cont.)

6. If owners or operators maintain more than one facility that contains PCBs in the quantities prescribed in paragraph C 1, are records and documents kept at a single location? Yes___No___N/A___C/A___

If yes, list location. _____

7. Do records provide information on a PCB disposal facility? Yes___No___N/A___C/A___

If yes, list name, location and type of facility (i.e., incinerator, boiler, landfill, etc.)

SECTION G. DISPOSAL

1. Are PCB articles or containers, which were stored for disposal after January 1, 1983, disposed of within 1 year? _____ Yes _____ No
2. Were items stored for disposal before January 1, 1983? _____ Yes _____ No
- a. Were they disposed of by January 1, 1984? _____ Yes _____ No
3. What items are disposed and state the disposal methods?

APPENDIX J

TSCA SECTIONS 5 AND 8 CHECKLIST

Table J-1

GLOSSARY OF TERMS AND ACRONYMS:
TOXIC SUBSTANCES CONTROL ACT SECTIONS 5 AND 8

SECTION 5: "New Chemicals"

(Note: TSCA Chemicals do not include pesticides, drugs, cosmetics, firearms, etc., by definition)

PMS	<u>Premanufacture notification</u> to EPA is required for all "new" TSCA chemicals, i.e., those not listed on the §8(b) existing chemical inventory.
SNURs	<u>Significant New Use Rules</u> require subsequent notification to EPA when usage/exposure changes (i.e., in addition to PMN).
NOC	<u>Notice of Commencement</u> to Agency is required before manufacture begins (after PMN review period has expired).
TME	<u>Test Marketing Exemption</u> to PMN requirement can be obtained on application to and approval by EPA - usually subject to specific restrictions.
R & D	<u>Research and Development Exemption</u> - automatic exemption, does not require Agency review or approval.
SECTION 5(e) Order	An administrative order prohibiting or limiting the manufacture, processing, distribution, use and/or disposal of a chemical for which a PMN is required because there is <u>insufficient information</u> to permit evaluation.
"Bona fide" Inquiry	Inquiry by manufacturer that intends to manufacture a specific chemical to determine whether that chemical is on the confidential portion of the Section 8(b) inventory. (Manufacturer must establish intent to manufacture to get reply from EPA.) If the chemical in question is not on the inventory and no PMN is filed subsequently, the manufacturer may be targeted for an inspection.
SECTION 5(f) Order/Rule	An administrative order or rule prohibiting/limiting the manufacture, etc., of a chemical for which a PMN is required because there is a <u>reasonable basis</u> to conclude that such activities present an unreasonable risk to health/environment.
SECTION 8	"Existing Chemicals"
PAIR	<u>Preliminary Assessment Information Reporting Rules</u> Promulgated under section 8(a) Level A - require reporting to Agency of production, uses and exposure of specific chemicals or classes of chemicals.

Table J-1 (cont.)

ITC	<u>Interagency Testing Committee</u> - designates chemicals listed in PAIR rules as well as some of the chemicals in section 8(d) rules. ITC is established under section 4(e) of TSCA. It also recommends chemicals for inclusion in testing rules under section 4(a).
SECTION 8(a) Level A Inspection	An inspection to determine compliance with PAIR rules.
SECTION 8(b) Inventory	Inventory compiled by EPA of all chemicals manufactured/processed in U.S. that were manufactured, imported or processed in the period 1975-1977. Chemicals for which PMN is submitted are added to inventory when manufacturing/processing commences (i.e., upon receipt of NOC). A major updating of the inventory will be undertaken in 1986.
SECTION 8(c) Inspection	An inspection to determine whether the manufacturer, processor, etc., has kept required <u>records</u> concerning <u>allegations of previously unknown significant adverse reactions</u> to health or environment.
SECTION 8(d) Inspection	An inspection to determine compliance with rules requiring submission of <u>health and safety studies</u> for chemicals or classes of chemicals designated by the Agency or the ITC.
SECTION 8(e) Inspection	An inspection to determine whether the manufacturer, processor, etc., has properly notified EPA (within 15 days of knowledge) regarding chemicals that present a <u>substantial risk</u> to health or environment.

Table J-2

INSPECTION NO. _____
 FACILITY/CITY _____
 INSPECTION DATE _____

TSCA SECTIONS 5 AND 8 CHECKLIST

	<u>Completed</u>	<u>#</u>
I. Inspection Management	_____	
II. Nature of Facility	_____	
III. §5 General Information	_____	
IV. <u>Bona fide</u> Review	_____	_____
V. Specific PMN Review	_____	_____
VI. 5(e) and 5(f) Order	_____	_____
VII. TME Review	_____	_____
VIII. TSCA §5 Research & Development (R&D)	_____	_____
IX. Low Volume Exemption (LVE)	_____	_____
X. Polymer Exemption	_____	_____
XI. Significant New Use Rule (SNUR)	_____	_____
XII. TSCA §8(a) Level A and 8(d) Compliance Review . . .	_____	_____
XIII. TSCA §8(c) and 8(e) Compliance Review	_____	

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

TSCA SECTION 5/8 CHECKLIST

I. INSPECTION MANAGEMENT (Attach additional information as necessary)

1. Name and Address of Facility: _____

2. Telephone No.: _____ DUNS No.: _____
3. Telephone Contact (Name, Title and Date): _____

4. Written Notification (Date): _____ [Exhibit 1]
5. Date and Time of Inspection: _____
6. Inspection Team: _____ (lead)

7. TSCA Notice of Inspection Issued to (Name, Title): _____ [Exhibit 2]
8. TSCA ICN Notice Issued to (Name, Title): _____ [Exhibit 3]
9. Other Company Inspection Participants (Names, Titles):
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____
10. Type of Inspection: ___ Routine ___ Special Request
 ___ Followup

INSPECTION NO. _____
 FACILITY/CITY _____
 INSPECTION DATE _____

INSPECTION MANAGEMENT (cont.)

11. Scope of Inspection (List by Federal Register, CAS No. or other designation):

___ Gen. Inv.: _____	___ 8(a) L(A): _____
___ Spec. PMN: _____	_____
_____	___ 8(b): _____
_____	___ 8(c): _____
___ TMEs: _____	___ 8(d): _____
___ LVEs: _____	___ 8(e): _____
___ PEs: _____	___ Sect. 4: _____
___ 5(e)/5(f): _____	___ Other: _____
___ BFs: _____	___ Other: _____
_____	_____

12. Walk-through: ___ Yes ___ No
 Areas: _____

13. TSCA Receipt for Samples and Documents Issued to:

(Name and Title) _____ [Exhibit 4]

TSCA Declaration of CBI Issued to:

(Name and Title) _____ [Exhibit 5]

14. Followup Information Requested: ___ Yes ___ No
 Date Received: _____

15. Remarks:

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

II. NATURE OF THE FACILITY (Attach additional information as necessary):

1. Facility History, Organization and Corporate Relationship:

2. Scope, Size and Functions of the Facility:

3. Facility Description and Layout:

INSPECTION NO. _____

FACILITY/CITY _____

INSPECTION DATE _____

III. TSCA §5 GENERAL CHEMICAL INVENTORY COMPLIANCE REVIEW

A. Interviewee(s): 1. _____
2. _____

B. Chemicals: ____ Manufactured ____ Imported ____ Processed ____ Other

1. Prepared list of chemicals available by CASR No. ____ Yes ____ No

2. List verified against company business records: ____ Yes ____ No

What records: _____

3. Records reviewed in lieu of prepared list (type and dates):

4. Chemicals reviewed on open inventory by _____
via _____

Date search completed: _____

No. unlisted chemicals: _____ (attach list)

Date unlisted chemicals sent to OCM: _____

Date reply: _____

No. chemicals unlisted in conf. inventory: _____

Date followup with facility: _____ (attach copy)

Date reply: _____ Status: _____

5. Additional Notes and Remarks: _____

INSPECTION NO.: _____
FACILITY/CITY: _____
INSPECTION DATE: _____

IV. TSCA §5 BONA FIDE REVIEW:

A. Interviewee(s): (1) _____
(2) _____

B. 1. EPA Accession No. _____
2. Name of chemical: _____
3. CAS Registry No. if known: _____
4. Date of submission: _____
5. Date of response by Agency: _____
6. Was chemical found on confidential inventory? _____
If yes, did company commercialize product? _____
7. What records were reviewed during inspection? _____

8. Remarks: _____

C. 1. Was PMN filed for chemical? _____
2. Date of submission: _____ PMN No.: _____
3. Was NOC submitted? _____
4. Was PMN reviewed during this inspection? _____
5. Remarks: _____

INSPECTION NO. _____
 FACILITY/CITY _____
 INSPECTION DATE _____

V. SPECIFIC PREMANUFACTURE NOTIFICATION (PMN) COMPLIANCE REVIEW

(One PMN per form)

A. Interviewees: (1) _____
 (2) _____

B. General Information:

1. PMN No.: _____ 90 day Date: _____ NOC Date: _____
2. Advance copy available: _____ Yes _____ No
 Copy at site: _____ Yes _____ No
3. Chemical Name: _____

4. Other Names: _____
5. Use at site: _____ Manufacture _____ Import _____ Process
 _____ R & D _____ Other

C. Production Compliance:

1. Date of first commercial manufacture or import (circle): _____
 How verified (records reviewed and dates): _____

2. Dates and amounts of R & D Production: (1) _____
 Use _____
 (2) _____
 Use _____

(Attach if more than 2 R & D batches)

How verified (records reviewed and dates): _____

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

V. SPECIFIC PREMANUFACTURE NOTIFICATION (PMN) COMPLIANCE REVIEW (cont.)

D. Technical Content

1. Chemical identity: _____

2. Monomer verification (for polymers only): _____

3. Impurities: _____

4. By-products: _____

5. Use(s): _____

6. Operation: _____

7. Exposure: _____

8. Env. Release: _____

9. Processing: _____

10. Test data: _____

11. Additional Information: _____

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

VI. SPECIFIC PMN-§5(e) and 5(f) ORDER

A. Interviewee(s): (1) _____
(2) _____

B. Compliance Restrictive Elements:

Was PMN chemical in commercial production at time of inspection?

__Yes __No

1. Testing Trigger

Specified Testing Production Volume Trigger _____

Was a Trigger volume reached? __Yes __No

If yes, when _____

If yes, has prescribed testing been initiated? __Yes __No

If yes, was commercial production stopped? __Yes __No

Remarks: _____

2. Gloves

Was glove testing a requirement? __Yes __No

If yes, was imperviousness testing conducted? __Yes __No

Was testing conducted by PMN Submitter/
Contractor (circle one)?

Did testing protocol meet Agency guidelines? __Yes __No

Were gloves demonstrated to be impervious? __Yes __No

Was glove usage observed? __Yes __No

Remarks: _____

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

VI. SPECIFIC PMN-§5(e) and 5(f) ORDER (cont.)

3. Protective Devices and Hazard Communication

What were protective clothing requirements? _____

Were employees observed to be wearing protective clothing as
described in consent order? ☐ Yes ☐ No

Were other protective measures and equipment in use by
employees as described in consent order? ☐ Yes ☐ No

Describe: _____

Were employees instructed and trained in the proper use of
protective equipment and measures? ☐ Yes ☐ No

How was this documented? _____

Were affected employees notified in training sessions with
respect to the hazards, dangers and concerns of the PMN
chemical? ☐ Yes ☐ No

Were signed attendance sheets available for review by the
inspector? ☐ Yes ☐ No

Had all operators received appropriate training? ☐ Yes ☐ No

How verified: _____

4. Waste Disposal

What was specified disposal requirement? _____

Was evidence of proper disposal present? ☐ Yes ☐ No

How verified: _____

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

VI. SPECIFIC PMN-§5(e) and 5(f) ORDER (cont.)

5. Label Requirements

What was type size specification? _____

Actual type size on label: _____

Remarks: _____

6. Evidence for Customer Compliance

Was there evidence of customer compliance with Agency
restrictions on use as described in manufacturer's letter
to final users? __Yes __No

Remarks: _____

7. General (Cleanliness and Housekeeping)

Was the production area of PMN Chemical clean and well-
maintained? __Yes __No

Was there any evidence of spillage or environmental release?
__Yes __No

Remarks: _____

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

VII. TSCA §5 TEST MARKETING EXEMPTION

A. Interviewees: (1) _____
(2) _____

B. General

1. TME No.: _____ Date of Receipt: _____

2. Chemical: _____

CASR No.: _____

Verification of Chemical Structure: _____

C. Restrictions

1. Period of Approved Use: _____ to _____

Verified via: _____

2. Production Volume Allowed: _____ Actual _____

Verified via: _____

3. Number of Customers: Allowed: _____ Actual _____

Verified via: _____

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

VIII. TSCA §5 RESEARCH & DEVELOPMENT (R & D)

A. Interviewees: (1) _____
(2) _____

B. Background

1. Does facility conduct TSCA defined R & D activities?	Yes	No

2. If not, where is basic R & D conducted for company?

3. Does facility/company have a written TSCA R & D policy?

	Yes	No

If yes, does the policy reflect recordkeeping and notification requirements that became effective 08/04/86?

Yes No

Does the facility/company routinely submit bona fide inquiries? Yes No

4. Remarks:

[illegible]

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

VIII. TSCA §5 RESEARCH & DEVELOPMENT (R & D) (cont.)C. Specific R & D Chemicals (one chemical per page)

1. Were any R & D chemicals specifically verified for compliance with R & D exemptions? ☐ Yes ☐ No
- a. Name of chemical: _____
- b. Was chemical produced in a quantity over 100 kg/year? ☐ Yes ☐ No
- c. Was recordkeeping complete? ☐ Yes ☐ No
What type of records? _____

- d. Were notifications adequate? ☐ Yes ☐ No
How verified? _____

- e. Were "technically qualified individuals" supervising use of the chemical(s)? ☐ Yes ☐ No
- f. Were risk reviews adequately documented? ☐ Yes ☐ No
- g. Were "prudent Laboratory practices" documented? ☐ Yes ☐ No
How documented? _____

- h. Were disposition records complete? ☐ Yes ☐ No
- i. Could a reasonable mass balance be accomplished for reviewed chemicals? ☐ Yes ☐ No
- j. Did amounts produced exceed R & D requirements? ☐ Yes ☐ No

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

VIII. TSCA §5 RESEARCH & DEVELOPMENT (R & D) (cont.)

k. What was disposition of excess R & D material(s)?

2. Remarks: _____

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

IX. LOW VOLUME EXEMPTION (LVE) (One LVE per form)

A. Interviewees: (1) _____
(2) _____

B. General:

1. LVE No: _____ Date of Receipt: _____
21-Day Review Date _____

2. Chemical: _____ CAS No.: _____
Other Names: _____

3. Use(s): _____

4. Manufacturing Site(s): _____

C. Restrictions:

D. Compliance:

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

IX. LOW VOLUME EXEMPTION (LVE) (cont.)

E. Production: 1st 12-month period (_____ to _____): _____ kg
2nd 12-month period (_____ to _____): _____ kg
3rd 12-month period (_____ to _____): _____ kg

F. Test Date: Were test data reviewed for
completeness? _____ Yes _____ No

Were data complete? _____ Yes _____ No
_____ Couldn't determine

G. Remarks:

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

X. POLYMER EXEMPTION (One PE per form)

A. Interviewees: (1) _____
(2) _____

B. General:

1. PE No.: _____ Date of Receipt: _____
21-Day Review Date: _____

2. Chemical Name: _____ CAS No.: _____
Monomer Composition: _____ % Residue _____ %
(Verified? _____) _____ % Residue _____ %
_____ % Residue _____ %

Number Average MW: _____ Verified: ___ Yes ___ No

Use(s): _____ Annual Production Vol.: _____ kg

(Actual): _____ kg

Facility/Address of Manufacturer/Importer:

3. Remarks:

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

XI. SIGNIFICANT NEW USE RULE (SNUR) (One SNUR Chemical per form)

A. Interviewees: (1) _____
(2) _____

B. General Information

1. SNUR No.: _____ 90-Day Review Date: _____
2. Chemical Name: _____ CAS No.: _____
Other Names: _____
3. Use at site: _____

C. Production Compliance

1. Date of first commercial manufacture, report or processing
(circle): _____
How verified (records reviewed and dates): _____

2. Remarks

Note: The PMN Technical Content (Part V) and 5(e)/5(f) Order
(Part VII) forms are to be used as appropriate for any
SNUR review.

INSPECTION NO.

FACILITY/CITY

INSPECTION DATE

XII. TSCA §8(a) LEVEL A AND 8(d) COMPLIANCE REVIEW

A. Interviewees: (1) _____

(2) _____

B. §8(a) Level A

1. Name of Chemical:

2. CAS Registry Number: _____

3. Published Reporting Date for PAIR/CAIR:

4. Corporate fiscal year:

5. Was PAIR/CAIR report submitted? Yes No

Date of Submission:

6. What information on PAIR/CAIR report was verified?

7. What records were reviewed?

8. Did records agree with submitted report? _____

9. Remarks:

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

XII. TSCA §8(a) LEVEL A AND 8(d) COMPLIANCE REVIEW (cont.)

C. §8(d)

1. Published reporting date for 8(d): _____
2. Was 8(d) report submitted? __ Yes __ No
Date of Submission: _____
3. Studies submitted (by title): _____

4. Remarks: _____

INSPECTION NO. _____

FACILITY/CITY _____

INSPECTION DATE _____

XIII. TSCA §8(c) and 8(e) COMPLIANCE REVIEW

A. Interviewees: (1) _____
(2) _____

B. §8(c)

1. Did facility have a §8(c) file? ☐ Yes ☐ No

Location of file: _____

Contents: (1) Allegations: ☐ Yes ☐ No

If yes, how many? ____

(Attach list of chemical(s), processes and effects)

(2) Copy of the 8(c) regulations?

☐ Yes ☐ No

(3) Copy of company or facility 8(c) policy?

☐ Yes ☐ No

2. If allegations were on file, did they appear to represent
unknown effects? ☐ Yes ☐ No

Remarks: _____

3. Were recorded allegations filed correctly and completely?

☐ Yes ☐ No

Remarks: _____

4. Other records (OSHA, incident files, lawsuits) reviewed for
allegations and findings? _____

INSPECTION NO. _____
 FACILITY/CITY _____
 INSPECTION DATE _____

XIII. TSCA §8(c) and 8(e) COMPLIANCE REVIEW (cont.)

5. Were company officials generally knowledgeable of 8(c) requirements? ☐ Yes ☐ No

Remarks: _____

6. Had there been any apparent attempts at employee outreach? ☐ Yes ☐ No

Remarks: _____

7. Were fact sheets and other information left with plant officials? ☐ Yes ☐ No

C. §8(e)

1. Did the facility or company have a §8(e) policy? ☐ Yes ☐ No

Did the facility have an 8(e) file? ☐ Yes ☐ No

Location of file: _____

Has the facility or company made any TSCA §8(e) submittals to the Agency? ☐ Yes ☐ No

List: _____

Were all 8(e) submissions filed within 15 days?

☐ Yes ☐ No

How verified: _____

INSPECTION NO. _____
FACILITY/CITY _____
INSPECTION DATE _____

XIII. TSCA §8(c) and 8(e) COMPLIANCE REVIEW (cont.)

2. Were company officials generally knowledgeable of 8(e) requirements? __Yes __No

Remarks: _____

3. Were other spills or releases reported to EPA State authority or the Coast Guard in a timely manner? __Yes __No

Remarks: _____

4. Have any civil lawsuits been filed against the facility with respect to health or environmental effects? __Yes __No

Remarks: _____

APPENDIX K
PESTICIDE CHECKLIST

Appendix K
PESTICIDE INSPECTION CHECKLIST

INTERVIEW/RECORDS

1. Are pesticides used at the facility? ___ Yes ___ No
 - a. Circle general types used:

Algacides
Insecticides
Fungicides
Herbicides
Rodenticides

Other _____
2. Are any restricted use pesticides used at this facility? ___ Yes ___ No
3. Are pesticides applied by facility personnel? ___ Yes ___ No
4. Are pesticides handlers certified? ___ Yes ___ No
 - a. Circle type of certification:

EPA
State
DOD
Other

 - b. Are pesticide handlers authorized for restricted use pesticides? ___ Yes ___ No
 - c. Are licenses/certificates current (not expired)? ___ Yes ___ No
5. Has the facility pesticide program been inspected before? ___ Yes ___ No
 - a. Circle by whom:

EPA
State
DOD
Other

 - b. General results _____

6. Does the facility have application records? ___ Yes ___ No
7. Has the facility filed restricted use pesticide reports? ___ Yes ___ No
8. Does the facility have inventory records? ___ Yes ___ No
9. Are target pests indicated on application records? ___ Yes ___ No
 - a. Are the pesticides used registered for use against the target pest? ___ Yes ___ No

Appendix K (cont.)

10. Are pesticide handlers' training records current? ☐ Yes ☐ No

a. Types of training _____

STORAGE

1. Is the storage area located on a flood plain? ☐ Yes ☐ No

2. Is the storage area fenced? ☐ Yes ☐ No

3. Is the storage area kept locked? ☐ Yes ☐ No

4. Are pesticides stored under cover? ☐ Yes ☐ No

5. Is the area well ventilated? ☐ Yes ☐ No

6. Is the area posted with pesticide or chemical warning signs (i.e., DANGER - POISON)? ☐ Yes ☐ No

7. Are pesticides separated by type? ☐ Yes ☐ No

8. Are the pesticides properly labeled? ☐ Yes ☐ No

9. Are pesticides stored in other than original containers? ☐ Yes ☐ No

a. Explain, if yes. _____

MIXING/LOADING

1. Is there a mixing/loading area? ☐ Yes ☐ No

2. Is the mixing/loading equipment functional? ☐ Yes ☐ No

3. Does the equipment help reduce the handlers exposure to pesticide? ☐ Yes ☐ No

4. Are label directions followed? ☐ Yes ☐ No

5. Is protective clothing worn by handlers? ☐ Yes ☐ No

6. Does protective clothing look used? ☐ Yes ☐ No

7. Is there a mechanism for rinsing containers? ☐ Yes ☐ No

8. How is rinse liquid disposed of? _____

Appendix K (cont.)

9. Is spray equipment cleaned between applications? ☐ Yes ☐ No

a. How is rinse liquid disposed? _____

CONTAINER DISPOSAL

1. Are label directions followed? ☐ Yes ☐ No

2. Are empty containers triple rinsed? ☐ Yes ☐ No

3. Are containers offered for scrap or recycle? ☐ Yes ☐ No

4. Are containers punctured or crushed to help prevent improper reuse? ☐ Yes ☐ No

5. Are drums given away for burn barrels, etc.? ☐ Yes ☐ No

6. Is there a container disposal site at the facility? ☐ Yes ☐ No

7. Is the site fenced and locked? ☐ Yes ☐ No

8. Are there pesticide or chemical warning signs posted? ☐ Yes ☐ No

APPENDIX L

WATER SUPPLY CHECKLIST

Appendix L
WATER SUPPLY CHECKLIST

Date of Inspection _____

Community ____ Noncommunity ____

1. Basic Information

Supply Name _____ I.D. Number _____
 County _____ Phone _____
 Establishment _____ Pop. Served _____
 No. of Service Connections _____
 Period of Operation: 12 month ____ Seasonal ____
 If Seasonal: From _____ To _____

2. Surface - Other community system ____ Wells ____ Spring surface ____

3. Other community system name _____

4. Wells (source of information) ____ Well log (attached)

Year installed ____ Casing Diameter _____ in. Depth _____ ft.
 Distance to potential contamination _____ ft. Source _____
 Controlled access to well? ____ Yes ____ No
 If yes, distance _____
 Comments: _____

Well Details:

Well house	____ Yes ____ No	Well seal	____ Yes ____ No
Heated, lighted	____ Yes ____ No	Water level	____ Yes ____ No
		device	____ Yes ____ No
Casing above grade	____ Yes ____ No	Grouted	____ Yes ____ No
Subject to flooding	____ Yes ____ No	Casing vent	____ Yes ____ No

Pump Details:

Brand and Model _____ Horsepower _____
 Capacity _____ gpm at _____ ft. head

Type: (Circle)

Submersible
 Vertical turbine
 Deep well jet
 Shallow well jet
 Shallow well centrifugal

Pump removal provision
 Pump to waste piping
 Capacity adequate
 Sample tap

Comments _____

Appendix L

5. Other Source
- ☐
- Spring
- ☐
- Surface source

Security (signs, fences, etc.) ☐Minimum available flow gpm ☐ Measured ☐ EstimateSources of contamination Source area ownership SpringsFencing ☐ Yes ☐ NoSurface runoff ☐ Yes ☐ Noditch ☐ Yes ☐ NoSpringbox ☐ Yes ☐ NoScreened Overflow ☐ Yes ☐ NoHatch and curbing ☐ Yes ☐ NoBottom drain ☐ Yes ☐ NoComments: Surface SourceImpoundment ☐ Yes ☐ NoDiversion dam ☐ Yes ☐ NoInfiltration ☐ Yes ☐ Nogallery ☐ Yes ☐ NoSpillway ☐ Yes ☐ NoIntake screens ☐ Yes ☐ NoDrain ☐ Yes ☐ NoSource name: Comments:

6. Storage

General: Volume gallons Type: ☐ Reservoir ☐ Hydro-pneumaticSeparate inlet/
outlet ☐ Yes ☐ NoHatch ☐ Yes ☐ NoWater level ☐ Yes ☐ Noindicator ☐ Yes ☐ NoDrain to
daylight ☐ Yes ☐ NoFlap valve ☐ Yes ☐ NoBooster pump ☐ Yes ☐ NoReservoir: Material Overflow ☐ Yes ☐ NoScreened vent ☐ Yes ☐ NoCovered ☐ Yes ☐ NoHydro-pneumatic tank: Operating range -

Appendix L (cont.)

7. Distribution System

Types of piping _____

Adequate pressure (20) _____ Yes _____ No

Flushing program _____ Yes _____ No

8. Chlorination: Continuous chlorination? _____ Yes _____ No

Sodium hypochlorite	_____	Yes	_____	No	Proportional	_____	Yes	_____	No
Calcium hypochlorite	_____	Yes	_____	No	to flow	_____	Yes	_____	No
Gas Chlorine	_____	Yes	_____	No	DPD chlorine	_____	Yes	_____	No
					test kit	_____	Yes	_____	No
					Booster pump	_____	Yes	_____	No

Type of chlorinator: _____

Contact time provided by: _____

Volume of contact chamber: _____ gallons (A)

Estimated maximum system flow: _____ (B)

Contact time - A/B -: _____ minutes

Comments: _____

9. Monitoring: Type of system (check)

_____ Groundwater
 _____ Surface water
 _____ Purchase from other water system

<u>Parameter</u>	<u>Required Frequency</u>	<u>Sampling Current?</u>		<u>Met MCL's?</u>	
		<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
Coliform bacteria	_____	_____	_____	_____	_____
Turbidity	_____	_____	_____	_____	_____
Inorganics (nitrate)	_____	_____	_____	_____	_____
Radiologic contaminants	_____	_____	_____	_____	_____
Organics	_____	_____	_____	_____	_____
Other	_____	_____	_____	_____	_____

Comments: _____

APPENDIX M
UNDERGROUND INJECTION CONTROL (UIC) CHECKLIST

Appendix M
UNDERGROUND INJECTION CONTROL (UIC) CHECKLIST

Regulatory Authority to Conduct Inspections

- Safe Drinking Water Act §1445
- 40 CFR §144.1(c)
- 40 CFR §144.51(i)
- RCRA §3007(a) (Class I wells only)

I. Type of UIC Program

_____ EPA Administered (40 CFR Parts 146 & 147 applicable)
 _____ State Administered (Applicable State Regulations)

II. Type of Well (40 CFR 146.5)

_____ Class I (see Parts IV, VA)
 _____ Class II (see Parts IV, VB)
 _____ Class III (see Parts IV, VC)
 _____ Class IV (see Parts IV, VD)
 _____ Class V (see Parts IV, VE)

III. Operation Authority

_____ Rule
 _____ Permit

IV. General Requirements

Construction

- (1) Depth to base of USDW _____
- (2) Depth to injection zone _____
- (3) If injecting into USDW, has formation
been exempted? _____ Yes _____ No
- (4) Adequate confining zone between USDW and
injection zone? _____ Yes _____ No
- (5) Surface casing length, type _____
volume, type of cement _____
- (6) Long string casing length, type _____
volume, type of cement _____
- (7) Intermediate casing(s) length type a) _____
volume, type of cement _____
b) _____

Appendix M (cont.)

- (8) Injection tubing length, type _____
packer _____ Yes ____ No ____
volume, type of cement on packer _____
- (9) Injection fluid _____
Corrosive _____ Noncorrosive _____
- (10) Injection pressure _____
- (11) Field verification of injection pressure _____ Yes ____ No ____
Pressure _____
- (12) Injection pressure limit? _____
- (13) Annular pressure _____
- (14) Annular fluid _____
- Types of logs run, date and interval tested:
- _____

- (15) Formation data:
Fluid pressure _____
Temperature (Class I) _____
Fracture pressure _____
Physical characteristics _____
Chemical characteristics _____
- (16) Construction complies with _____ Yes ____ No ____
Permit or Rule _____
If not, specify _____
- (17) Facility operations match permit/rule _____ Yes ____ No ____
requirements _____
If not, specify _____

Appendix M (cont.)

- (18) EPA notified of any discrepancies in operations ☐ Yes ☐ No
- (19) Emergency procedures adequate ☐ Yes ☐ No
- (20) High and low pressure shutoffs on both pumps and source tanks ☐ Yes ☐ No
- (21) Number and location of injection wells are as described in inventory and/or permit conditions ☐ Yes ☐ No
- (22) All information required is available and current ☐ Yes ☐ No
- (23) Information is retained for required period ☐ Yes ☐ No
- (24) Sampling and analysis data are complete ☐ Yes ☐ No
- (25) EPA notified of any well failures and/or corrective actions ☐ Yes ☐ No
- (26) Plugging and abandonment plan on file ☐ Yes ☐ No
- (27) Financial assurance current and on file ☐ Yes ☐ No

V. Operating, Monitoring, Reporting Requirements

A. Class I Requirements:

- (1) Injection pressure exceeds maximum ☐ Yes ☐ No
- (2) Injection between outermost casing and well bore ☐ Yes ☐ No
- (3) Continuous monitoring of:
- a. Injection pressure ☐ Yes ☐ No
 - b. Flow rate ☐ Yes ☐ No
 - c. Volume ☐ Yes ☐ No
 - d. Annulus pressure ☐ Yes ☐ No
 - e. All monitoring equipment operational ☐ Yes ☐ No
- (4) Sample injected fluid frequently enough to be representative ☐ Yes ☐ No
- (5) Mechanical Integrity test
- a. Within the last 5 years ☐ Yes ☐ No
 - b. Pass _____ Fail _____

Appendix M (cont.)

If fail, were workovers completed
and well retested?

___ Yes ___ No

(6) Wells within area of review (AOR)

___ Yes ___ No

a. Type, number, location of wells within AOR
used to monitor USDW (attach map if
necessary) _____

b. Are required parameters monitored

1. physical (pressure)

___ Yes ___ No

2. chemical

___ Yes ___ No

(7) Quarterly Reports to Director containing:

a. Physical, chemical characterization of
injected fluid

___ Yes ___ No

b. Monthly average, maximum and minimum
values for:

1. injection pressure

___ Yes ___ No

2. flow rate

___ Yes ___ No

3. volume

___ Yes ___ No

4. annular pressure

___ Yes ___ No

5. results from monitoring wells

___ Yes ___ No

6. mechanical integrity test

___ Yes ___ No

7. well workovers

___ Yes ___ No

8. any other tests

___ Yes ___ No

(specify) _____

B. Class II Requirements:

(1) Injection pressure exceeds maximum

___ Yes ___ No

(2) Injection pressure exceeds confining
zone maximum adjacent to USDW

___ Yes ___ No

(3) If operating above fracture pressure:
pressure, location and number of
wells affected by injection (attach
map)

(4) Injection between outermost casing and
well bore

___ Yes ___ No

(5) Representative sample of injection fluid

___ Yes ___ No

Appendix M (cont.)

- (6) Observation of pressure, flow rate and cumulative volume at the following frequency:
- | | | |
|------------------------------------|------------------------------|-----------------------------|
| a. Brine disposal (IID) weekly | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. Enhanced recovery (IIR) monthly | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c. Hydrocarbon (IIH) daily | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d. Cyclic steam daily | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
- (7) Recording of one observation of pressure, flow rate and cumulative volume at least once every 30 days ☐ Yes ☐ No
- (8) Mechanical integrity test every 5 years ☐ Yes ☐ No
- (9) Manifold monitoring (for IIR or IIH)? ☐ Yes ☐ No
- If yes, demonstration approval by Director for alternate monitoring ☐ Yes ☐ No
- (10) Maintain records until next permit review ☐ Yes ☐ No
- (11) All monitoring equipment operational ☐ Yes ☐ No

C. Class III Requirements:

- (1) Formation data (Substitute for IV 15)
- a. If naturally water-bearing:
1. Fluid pressure _____
 2. Fracture pressure _____
 3. Physical characteristics _____
 4. Chemical characteristics _____
- b. If non water-bearing:
1. Fracture pressure _____
- c. If formation is a USDW, monitoring wells must be located in the injection formation and in any USDW's above the injection formation to detect migration of injected fluids, process by-products or formation fluids outside the injection zone
1. Are appropriate wells located to monitor injection operation ☐ Yes ☐ No

Appendix M (cont.)

2. If area is subject to subsidence or catastrophic collapse, are wells located so they will not be physically affected? ☐ Yes ☐ No
- d. If injection wells penetrate a USDW and in an area subject to subsidence or catastrophic collapse:
1. Are these monitoring wells completed into the USDW? ☐ Yes ☐ No
2. Are the monitoring wells capable of detecting the movement of injected fluids and by-products into the USDW? ☐ Yes ☐ No
3. Are the wells located outside the physical influence of subsidence or catastrophic collapse? ☐ Yes ☐ No
- e. What is the frequency of monitoring wells under c and d above? _____
- f. Were the following points evaluated in the determination of monitoring frequency?
1. Population relying on USDW ☐ Yes ☐ No
2. population affected by injection ☐ Yes ☐ No
3. Proximity of injection to points of drinking water withdrawal ☐ Yes ☐ No
4. Operating pressures ☐ Yes ☐ No
5. Nature and volume of injected fluid ☐ Yes ☐ No
6. Injection well density ☐ Yes ☐ No
- (2) Injection pressure exceeds maximum ☐ Yes ☐ No
- (3) Injection between outermost casing and well bore ☐ Yes ☐ No
- (4) Injection fluid sampled frequently enough to be representative ☐ Yes ☐ No

Appendix M (cont.)

- (5) Monitoring of injection pressure semimonthly and either: ☐ Yes ☐ No
- a. Flow rate ☐ Yes ☐ No
- b. Volume ☐ Yes ☐ No
- c. Metering and daily recording of:
1. injected volume ☐ Yes ☐ No
2. produced fluid ☐ Yes ☐ No
- (6) MIT at least once every 5 years for salt solution mining ☐ Yes ☐ No
- (7) Monitoring the fluid volume in the injection zone semimonthly ☐ Yes ☐ No
- (8) Monitoring the appropriate parameters chosen to measure water quality in the monitoring wells semimonthly (see 12c above) ☐ Yes ☐ No
- (9) Quarterly monitoring of wells (see 12d above) ☐ Yes ☐ No
- (10) Manifold monitoring? ☐ Yes ☐ No
- (11) Individual well monitoring? ☐ Yes ☐ No
- (12) Facility received approval for manifold monitoring? ☐ Yes ☐ No
- (13) Quarterly reports to Director? ☐ Yes ☐ No including:
- a. MIT ☐ Yes ☐ No
- b. Other tests (specify below) ☐ Yes ☐ No
- c. Reported by project/field ☐ Yes ☐ No
- d. Individual wells ☐ Yes ☐ No
-
-

D. Class IV Requirements:

Class IV wells are banned and have no inspection requirements other than plugging and abandonment or continued monitoring according to individual State/EPA requirements

- (1) Date plugged and abandoned _____

Appendix M (cont.)

(2) Other available information _____

E. Class V Requirements:

No monitoring requirements unless permit has been issued by a delegated State.

If State issued permit, specify requirements and compliance/noncompliance _____

