NEIC

MULTI-MEDIA COMPLIANCE
AUDIT PROCEDURES

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OFFICE OF ENFORCEMENT AND COMPLIANCE MONITORING

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INTRODUCTION

PURPOSE

This manual is a guide to aid inspectors who conduct multi-media compliance audits of facilities that discharge, emit, handle or dispose of pollutants controlled by Federal, State or local environmental laws and regulations. Investigative methods are presented which integrate the enforcement programs in air, water, solid waste and toxic substances. The manual includes general activities and functions while focusing on special features of the specific media.

The purposes of a multi-media compliance audit are to review a facility's pollution control practices, inspect waste handling equipment, evaluate waste handling procedures, and determine status of compliance with applicable laws and regulations. Appendix A summarizes the environmental laws which EPA enforces. Emphasis is given to identifying violations of regulations, permits, approvals, consent decrees, etc. and the underlying causes of the violations. Given the number of environmental laws and regulations which may apply to the facility, an in-depth review cannot always be made. The inspectors, though, are to conduct as thorough a review as possible so that violations and problems that have an existing or potential effect on the environment are identified.

Pollution sources vary in complexity depending on facility size, process operations and the number of pollution programs involved (e.g., air, water, solid waste, toxic substances). The time and personnel resources required, therefore, vary accordingly. For example, a large industrial facility with multiple process operations may require consideration under several environmental laws, such as the Clean Water Act (CWA), Clean Air Act (CAA), Resource Conservation and Recovery Act (RCRA) and 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 sufficient combined experience to effectively audit the pollution potential of the facility.

OBJECTIVES

This guide is to provide clear and uniform procedures for multi-media compliance audits. Specific objectives of such audits are to:

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

SCOPE

The multi-media compliance audit approach effectively uses investigatory personnel to reduce multiple visits to the same facility. This manual discusses the information that audit teams should obtain prior to the actual compliance audit field procedures, the audit itself, report writing and followup procedures.

In performing compliance audits, inspectors shall follow established Agency policies and procedures for chain-of-custody and document control; receipt and handling of confidential information; employee conduct, responsibilities and ethics; quality assurance and quality control; and applicable safety rules. When established policies and procedures do not exist, common sense guided by experience must be used. The inspectors shall collect factual and valid information and data which are supportable and admissible for use in subsequent enforcement action.

PLANNING THE AUDIT

The successful accomplishment of any project requires extensive, up-front planning. Coordination with all interested parties (e.g., Region, State, audit team members, NEIC supervisory staff) is essential to assure a smooth operation. All of the individuals concerned should be identified as soon as possible and the necessary coordination initiated.

A project plan assures an effective compliance audit and that all involved parties are aware of the upcoming activites. A comprehensive plan is prepared to describe the project objectives and tasks required to fulfill the objectives, procedures to be followed, required resources and schedules. A project plan will generally address 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."). This involves evaluation of process operations, pollution control/treatment and disposal practices, operation and maintenance procedures, self-monitoring and self-reporting practices and pollution abatement/control needs.

Tasks - The plan clearly lays out tasks for accomplishing the objectives and spells out procedures for obtaining necessary information and evaluating facility compliance.

Procedures - The plan gives policies and procedures for document control, chain-of-custody, quality assurance, handling and processing of confidential information, and safety which must be followed by EPA audit teams. Appendix B provides guidance for developing a safety plan. Specific instructions for the particular audit are also provided.

Resources - Personnel needs and equipment requirements are described. Experienced personnel, knowledgeable of pollution control activities, shall comprise the compliance audit team.

Schedules - A schedule of project activities is necessary for smooth project operations. The schedule is important to the participants as well as those Regional and/or Headquarters officials who requested the project. Start and finish dates of the field activities, dates for analytical work and dates for draft and final project reports should be firmly established and understood at the beginning.

THE AUDIT TEAM

SKILLS REQUIRED

The audit team should consist of individuals who possess a good working knowledge of the various environmental pollution control statutes and understand the rules, regulations and other provisions, including permits, registrations, authorizations, limitations, monitoring requirements, etc., as they pertain to a specific facility. The inspectors should have knowledge of manufacturing and production processes, applicable pollution control technology, and the nature of pollution problems and possible solutions, including available treatment and controls.

Individual inspectors may have more specific knowledge of a process, control equipment, regulation, etc. than others. The team, as a whole, however, should have the knowledge and background to be able to conduct all aspects of the audits.

The inspectors should be familiar with agency policies and procedures, know their authority to conduct the inspection, know techniques for evidence gathering and possess skill in collecting information and obtaining statements from interviewees.

INSPECTOR RESPONSIBILITIES

Inspectors represent the Agency in their dealings with the regulated community and the public. They must conduct themselves in a professional manner and maintain their composure at all times. Cooperation and good working relations with facility personnel should be established, whenever possible, and maintained. EPA inspectors 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. Inspectors will dress appropriately, including wearing protective clothing or equipment. It is important that inspectors

identify and obtain necessary safety equipment before the audit so that the audit will not be hindered or precluded. Inspectors should provide their own safety equipment and not rely on the facility to do so. All required FIT testing and certifications must be done in advance.

Inspectors must properly handle information for which confidentiality is claimed or requested to prevent disclosure to unauthorized persons. Inspectors must have specific authorization for accessing and handling Confidential Business Information under TSCA rules. 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 files of Federal, State and local agencies, technical libraries, EPA databases and other information sources. This review will enable inspectors to become familiar with facility operations, clarify technical and legal issues before entry, and develop a sound, factual audit report.

A properly conducted background review should consider both the technical and legal information needed and the available information sources. The following discusses the types of information which may be acquired and reviewed.

Technical Information

Facility Background

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

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
- Previous audit records, reports, correspondence on past incidents or violations
- Emissions inventory
- Self-monitoring data and reports
- Previous EPA, State and consultant studies and reports
- Annual reports by the facility (e.g., PCB Annual Documents and inventories, §10K reports)
- Data including records, applications, reports, manifest files, etc. (e.g., RCRA reports, CERCLA submittals)
- Laboratory audit reports, QA/QC activities
- Reports of previous hazardous substances spills

Pollutant and Waste Generation, Control, Treatment and Disposal Systems

- Description and design data for each appropriate pollution control system and process operation
- 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 of
- Waste storage, treatment and disposal areas
- Waste/spill contingency plans
- Available bypasses or diversions and spill containment facilities
- Industrial process, pollution control, treatment and disposal methods, monitoring systems

Legal Information

Requirements, Regulations and Limitations

- Copies of permit applications, draft or existing permits, registrations, approvals and applicable Federal, State and local regulations and requirements
- Copies of draft permits or information on draft permit terms which are different from current terms
- Special exemptions and waivers
- Receiving stream water quality standards, ambient air standards, SIPs, protected uses
- RCRA notification and Part A and Part B application data
- Grant applications for publicly owned treatment works, R&D demonstration projects and progress reports on these projects
- Official 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

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 to the same facility.

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* *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 case and any consent decree.*

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 [160.15]	8, 9 [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]	3002, 3003, 3004, 9003 [262.40, 263.22, 264.74, 264.279, 264.309, 265.74, 265.94, 265.279, 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]	[2.201-2.215, 2.302, 122.7]	104 [2.201-2.215]	7, 10 [2,201-2.215, 2.307]	9005 [2.201-2.215, 2.305, 260.2, 270.12]	[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 applications, standard permit conditions, monitoring, reporting		[122, 125]			[270]	[144, 147]	
EPA procedures for permit issuance	[124]	[124]			[124]	[124]	
Technical requirements	[52]	[136, 302][c] BMP[d] [125] SPCC[e] [112] Waivers [125, 230]			[260-266]	[146, 264]	
Specific Source Category - Controls - Limitations - Standards - Rules	NSPS[f] [60] NESHAP[g] [61] CEM[i] [60], SIP[j] [52] PSD[k] [50]	Effluent guidelines [400-460] BMP [125], SPCC [112], Pretreatment [125, 403], Toxic pollutants [129]			Generators [262], Transporters [263], TSD[h] [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 *TSD - Treatment, Storage and Disposal*
i *CEM - Continuous Emission Monitoring*
j *SIP - State Implementation Plan*
k *PSD - Prevention of Significant Deterioration*

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 or 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, pertinent specific 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 or hazardous waste generation, treatment/disposal are also becoming available.

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

NOTIFYING THE FACILITY

Notification is not required when illegal activity, such as illegal discharges and/or emissions or improper recordkeeping, are suspected.

Table 2

BACKGROUND REVIEW INFORMATION SOURCES

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

The concern that physical conditions may be altered prior to the audit or that records may be destroyed justifies an unannounced audit. Normally, compliance audits are announced; that is, facility officials are contacted prior to the audit. 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 provides an outline of the areas that will be covered by 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 made available.

Typical information requested by a notification letter may include the following:

- Raw materials, products, byproducts, production levels
- Facility maps identifying process areas, discharge and emission points, waste disposal sites
- Flow diagrams for 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
- O&M problems that may be causing violation of applicable regulations and limitations
- Recent self-monitoring reports and inventories of discharges and emissions
- Self-monitoring equipment in use, normal operating levels and available data
- Required records

Information already available in regulatory files should not be requested if the facility is handling any TSCA regulated substances (e.g., PCBs).

CONDUCTING THE AUDIT

The compliance audit will consist of the following phases:

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

ENTRY

Arrival at the facility should be made during normal working hours, unless special circumstances, such as suspected illegal activity at night, etc. are being investigated. The inspectors 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 inspectors the authority to enter facilities, review records and collect environmental samples. The inspector should not discuss their authority to conduct the audit unless requested by facility personnel.

If the audit is of a Federal facility that has national security, restricted areas or classified areas, special procedures may be required for entry. For example, a military installation regulation may stipulate that "inspectors shall be required to show proof of appropriate security clearance before entry is approved into restricted areas". Inspectors 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 inspectors to sign it. Note, however, that EPA employees will 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. The inspector

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 - 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 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

". . .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."

". . .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. . .".

"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(3)(I)

". . .any person who stores, treats or disposes of. . .where such hazardous substances are located, who generates, transports or otherwise handles or has handled hazardous substances shall. . .furnish information relating to such substances and permit such person at all reasonable times to have access to, and to copy all records relating to such substances."

". . .such officers, employees, or representatives are authorized. . .to enter at reasonable times any establishment or other places where such hazardous substances are or have been generated, stored, treated or disposed of, or transported from."

". . .to inspect and obtain samples from any person of any such substance and samples of any containers or labeling for such substances."

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
Clean Water Act	§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
FIFRA	§8(b) (Books & Records)	Yes, designated by Administrator	Required	Written notice required with reason and suspected violation note	No	Yes	N/A	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	Required, promptly
Clean Air Act	§114(a)	Yes, auth. by Administrator	Required	Not required except notify State for SIP sources	Yes	Yes	Not required	Not required	Not required
RCRA	§3007(a) 9005(a)	Yes, designated by Administrator	Not required	Not required	Yes	Yes	Required, if requested	Required	Required, promptly
SDWA	§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
TSCA	§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	N/A	N/A
CERCLA	§104(3)	Yes, designated by President	Not required	Not required	Yes	Yes	Required, if requested	Required	Required, promptly

must not agree to any such unwarranted restrictive conditions. If such a waiver or release is presented, the inspectors should politely explain they cannot sign and request a blank sign-in sheet. If the inspectors are refused entry because they do not sign such a release, they should leave and immediately report all pertinent facts to the appropriate supervisory and/or legal staff (e.g., Office of Regional Counsel). All events surrounding the refused entry should be fully documented, including the name of the person refusing entry. Problems should be discussed courteously and professionally. Facility officials must not be subjected to intimidation by emphasizing the Government's right to inspect.

Various Federal environmental statutes give Agency inspectors 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. As long as the inspector is allowed to enter, entry is considered voluntary and consensual by the facility operator or owner, unless the inspector 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 inspectors. When withdrawal of consent takes place, the same procedures apply as for denial of entry.

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

Under 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 particular audit functions. It is possible that a pre-audit warrant could be obtained where there is reason to believe that entry will be denied when the inspector arrives at the site or when violations are expected which could be hidden during the time a search warrant was obtained. Administrative search warrants can be served by an inspection team member. Other 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 inspection team member.

OPENING CONFERENCE

At the opening conference with facility officials, the inspector presents credentials; provides names of the inspectors, purpose of the audit and laws under which the audit is being conducted; and outlines procedures to be followed. Any required notices should also be presented to facility representatives at this time, if not previously done.* The Agency encourages cooperation between the inspectors and the facility officials; this will simplify assignments and contribute to the success of the compliance audit.

Major topics at the opening conference should include: audit objectives, processes and areas to be inspected, anticipated audit schedules to various areas of the facility, basic types of records to be inspected, safety requirements, the handling of confidential data (which should be obtained only if absolutely necessary), how questions will be handled 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, splits or any samples taken and receive the results of analyses. If inspectors desire to take photographs or copies of records during the audit, this should also be discussed.

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* *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 inspector presents a TSCA Inspection Confidentiality Notice which informs the facility of their right to claim certain materials as Confidential Business Information (CBI).*

Photographs may be used to prepare a more thorough and accurate inspection report, as evidence in enforcement proceedings and to better 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.

Facility personnel may also request that any photographs taken during the visitation be considered confidential, with which the Agency is obliged to comply, pending further legal determination. Self-developing film, although of lower 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 inspector and the other for the facility) should satisfy this need. When taking pictures under TSCA authority, self-developing film eliminates processing problems, because the film processing facility must also have TSCA clearance. Note, however, that self-developing film may contain disposable negatives which must also be handled in accordance with the TSCA requirements. Giving the facility the option of having the film developed 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

This section describes general elements that are common to all environmental program areas--process operations, pollution control, treatment and disposal, and operation and maintenance. Specific elements that complement the general elements and that can be used when deemed appropriate are contained in the following section, organized by program area--air, water, solid/hazardous wastes, and toxic substances; additional checklists are provided in the appendices.

Activities include reviewing records; observing and evaluating equipment, monitors, devices or activities directly; and interviewing facility personnel. It is, therefore, important to have a knowledgeable facility representative accompany the inspectors during this segment of the audit and/or to be available for questions.

If the audit includes determining consent decree compliance, the following procedures are recommended:

- Inspectors should ascertain the names and functions of the facility individuals familiar with, and responsible for, compliance with the terms of the consent decree.
- Inspectors should be thoroughly aware of contents of the decree, interim and final deadlines and any modifications of the decree that have occurred prior to the audit.

Process Operations

The inspectors must have a basic understanding of the physical plant under investigation and the processes in use at the facility. This knowledge is necessary to aid in the determination of 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. It is not necessary that a compliance audit team have an in-depth understanding of all the intricacies of the industrial processes but inspectors should have sufficient understanding to conduct a thorough, efficient audit.

The compliance audit team may perform the following:

- Determine if changes have been made since the last audit, permit issuance, etc. to process units, their operation and flow diagrams by comparing to available information. Determine the present production level and rate of products, byproducts 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 of. Different production levels could cause higher emission mass loadings or gas flow rates. Varying operating conditions may mean 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 specifics on these modifications, including schedules, and certainty of the modifications (e.g., is the change proposed or planned, is money set aside). Obtain facility estimates on wastes generated and/or discharged.

Pollution Control, Treatment and Disposal

After inspectors have determined what wastes are generated by each process, they should determine how the materials are handled and ultimately released, treated or otherwise disposed of. This will include tracking the waste from generation to final disposition, using process flow diagrams, physical audits, facility records and other means.

The compliance audit team may perform the following:

- Determine which waste streams are regulated by Federal, State and/or local regulations, licenses and approvals. In doing so, the inspectors 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 equipment or disposal areas. Observe equipment or disposal practices 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 or abnormally. Identify any operating problems and their causes.

- Evaluate sampling techniques, equipment and locations to be used for collection of representative samples. Identify recycle or dilution streams and other flow disturbances and reference to these sampling locations. Determine if samples are being collected

consistent 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 records are consistent with permits and regulations, and if results are properly calculated and reported. Evaluate quality assurance/quality control procedure 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 firsthand 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 for new pollution control activities have been initiated.

- Review laboratory analytical methods and procedures and quality control measures. Determine if the methods conform to permit or regulatory requirements. Determine if quality control is sufficient to generate valid data (e.g., proper and timely calibration, fresh chemical reagents, scheduled equipment maintenance, etc.).

Operation and Maintenance (O&M)

Knowledge of operation and maintenance of process and control facilities provides the inspector 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 regularity of housekeeping throughout the plant. It also includes review of facility protocol 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. Inspectors should be prepared to observe and document these audit items so that factual information can later be evaluated and compliance determined. Prior to the audit, review of the checklists in Appendix D is encouraged.

Operating Conditions

- Determine if construction and operating permits are updated.

- Determine if emission inventories are updated.

- Review records of abnormal operations, shutdowns, malfunctions.

- Determine if any operational changes (feedstock, fuel flow rate, temperature changes, etc.) have been made that could affect emissions.

- Observe evidence of air pollution effects on premises but especially over surrounding areas (e.g., odors, dusting, deposits on cars, vegetation damage). Fugitive emissions may require special attention. Odor problems are best 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.

- Conduct control system evaluation. Review instrumentation, design and operational flow rates, temperatures, pressure drops and emission monitors. From these data, the inspector should know if the plant can achieve compliance under normal circumstances.

- Check control equipment maintenance procedures, malfunctions and corrective action taken.

- Check number of emissions violations and any complaints since the last audit.

Continuous Monitoring

- Check equipment and records on continuous monitoring, as required by NSPS, of specific pollutants by certain industries.

- Correlate the readings of opacity monitors with VEOs.

Compliance Records and Testing

- Check source records for compliance with applicable regulations, including NESHAP, NSPS.

- Determine if an onsite visible emission audit is warranted; an inspector doing CAA audits must be certified for visible emissions reading or the information developed may require duplication.

- Check results of compliance tests. The Company 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. The test is usually witnessed by control agency officials. Process and emission parameters must have been adequately documented during test.

Water

Water pollution audit items are categorized as control and treatment systems; self-monitoring systems, including both field and laboratory areas; operation and maintenance and the Best Management Practices (BMP) plan. Before the audit, the inspectors are encouraged to review the checklists in Appendix E. The checklists also includes the Spill Prevention Control and Countermeasure (SPCC) plan which companies are required to have to prevent or control spills of petroleum products. Note that spills of hazardous substances are covered by 40 CFR 117.

Control and Treatment Systems

Assess 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 sampling and flow measurement by the facility and its laboratory which analyzes water samples required for developing necessary data under the NPDES 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. Representative 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; there is excess accumulation of solids, scum, grease and floating materials in the treatment units; or 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 is indicated if toxics are contributed from ancillary operations and reasonable opportunity exists for discharge. BMP and SPCC plans, documents and facilities should be reviewed.

Solid/Hazardous Waste

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

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* *Definition, identification and listing of federally regulated waste are given in 40 CFR 260 and 261.*

** *Solid (nonhazardous) waste is usually regulated by State regulations and these regulations must be obtained to evaluate applicable facility activity.*

Once the regulated waste is identified, the inspector can track the material from generation to final onsite disposition (onsite treatment/disposal) or storage and/or transport to offsite disposal and determine compliance with applicable regulations. Throughout the audit, the inspector 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 management activity; examination of facility records, including any internal waste tracking/storage/disposal logs, audit records and offsite shipment records ("bills of lading" and manifests); 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 inspector will have to determine how extensive a records review will be necessary to meet the compliance evaluation objectives of the audit. Factors such as number of documents available, available resources and time constraints determine whether the objectives are realistic and can be achieved. However, in all cases, the records review must be sufficient to show patterns of facility compliance or noncompliance. Often, because of time constraints, it may be necessary to obtain copies of documents (either microfilm or photocopies) for future review and evaluation.

Inspectors are encouraged to use the various RCRA evaluation checklists in 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 inspector 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)]. Military installations also have the responsibility to conduct site assessment through remedial action

programs to identify past hazardous substance releases and handling facilities [40 CFR 300.64-68]. The inspector should determine, through records review, interviews, etc. [Appendix G], whether or not all CERCLA sites have been reported to the proper authorities. The inspector should also evaluate assessment and response programs at a facility, if this objective is within the scope of the audit.

The facility should also be evaluated concerning State and local requirements controlling past and current disposal of municipal waste, non-hazardous industrial waste and construction debris. The information concerning such past disposal activities may lead to unreported CERCLA sites.

All of the 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 compliance/non-compliance as outlined in the following sections.

General Facility RCRA Status

Determine if the facility has notified EPA of its hazardous waste handling activity (waste generation, transport, treatment, storage and/or disposal) and has a required EPA identification number (40 CFR 262.12).

For treatment, storage or disposal (TSD) facilities, as per 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 called for, submitted (if so, when), or reviewed by EPA; does the facility have a Part B permit in place? If a permit has been issued, the facility is subject to the specific permit provisions and requirements of 40 CFR 264. If no RCRA Part B permit is in place, the facility is subject to the interim status provisions of 40 CFR 265. In both cases, the facility may also be subject to requirements of State/local regulations, licenses and approvals. The inspector should determine, prior to the audit, if State/local regulations apply. The inspector should have a copy of the current Part A application (with amendments), the Part B application (if available) and the RCRA permit (if issued in draft)

during the audit so that the accuracy of the Part A and B applications can be verified or 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 only authorized to accumulate waste for less than 90 days (40 CFR 262.34), 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 inspector 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 inspector should determine if all storage area audits are performed regularly and documented.

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.

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* *If a generator has stored waste for more than 90 days, it is subject to the Federal requirements of 40 CFR 265 and 40 CFR 270 or the comparable State requirements in authorized states.*

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

Treatment, Storage and Disposal Facilities

The inspector must 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 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 inspector 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

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* *Under Federal regulations, transporters can only store waste at a transfer facility for less than 10 days.*

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

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), it is usually necessary to obtain copies of the plans for an in-depth analysis of their adequacy. The inspector, by observing actual facility operations, 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. It is suggested that out-of-date plans also be reviewed for compliance with applicable regulations in effect at the time the plans were in place.

The inspector must also evaluate facility records required to be maintained by the regulations (manifests, waste analysis results, operating record, 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 best comprehensive audit, this is not always possible due to the number of documents. In these cases, the inspectors must decide on the minimum number of records necessary to identify patterns of compliance/noncompliance. In situations where a relatively large number of documents must be reviewed and immediate time or resource allocations do not allow for adequate evaluation, it may be beneficial to obtain copies (either microfilm or photocopies) to be reviewed at a later date.

In addition to the general requirements specified above, the inspectors 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.)
- compatability of waste with containers
- management of containers
- audit records

Tanks (40 CFR 265/264, Subpart J)

- general operating procedures
- compatability of waste with tank construction material
- integrity of tanks
- corrosion rate of tank materials
- compatability 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/runon 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
- runon/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

Various "toxic substances" are regulated by the Federal Toxic Substances Control Act (TSCA). Although the controlled substance most frequently encountered during multi-media investigations is polychlorinated biphenyls (PCBs), the inspector should determine if other regulated toxic substances are present at the facility. Currently these include fully halogenated chlorofluoroalkanes (40 CFR 762), asbestos (40 CFR 763) and dioxin (40 CFR 775); 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 inspector must consult the regulations for specific 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 inspector is encouraged to use TSCA audit checklists, such as the ones provided in Appendix H, to ensure that a complete audit is performed.

Facilities which store and/or dispose of PCBs and PCB items often have EPA-issued Letters of Approval which contain facility operating and/or

recordkeeping requirements in addition to those specified in 40 CFR 761. The inspector 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 of facility records and visual audit of material handling units.

Prior to discussing TSCA activities* at a facility, the inspector must complete and present appropriate facility personnel with copies of the following three TSCA audit forms [Appendix I):

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)

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

A fourth form, Receipt for Samples and Documents, is presented to the facility at the close of the audit. It itemizes all documents, photos and samples received by the inspector during the audit.

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

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* *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.*

** *Although this form is presented at the initiation of the audit, it is generally completed after the audit has been conducted.*

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 H. In general, the inspector must 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 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 or not all audit and maintenance records are being maintained, as required. Review these records to determine if problems identified during the audit are being addressed properly. PCB items should be inspected to verify that they are in non-leaking condition.

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

Determine if the facility is servicing PCB items and/or using PCBs in the following manner: heat transfer systems, hydraulic systems, 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 inspected and that remedial action is conducted, as required.

If PCBs/PCB items are stored outside of the designated storage facilities (i.e., temporary storage); determine if items are stored properly, including if: (1) items are leaking, concentration of liquids stored in containers [liquids with PCB concentrations greater than 500 ppm cannot be stored in temporary areas (except for transformers)] and (2) 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.

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 approval. 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: incompatables are being landfilled with the PCBs/PCB items, the facility is maintaining required records (including concentration of liquids disposed of and three-dimensional burial coordinates of waste), site security is accurate, liquids are solidified prior to disposal, and transformers and other PCB items are being properly prepared (drained/rinsed, etc.) prior to disposal. Evaluate the required PCB annual document for adequacy and accuracy.

Determine if the facility is monitoring surface and groundwater, 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.

Pesticides (Algaecides, Insecticides, Fungicides, Herbicides, Rodenticides, etc.)

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

The following list of pesticide audit items is for use in conjunction with the checklist in Appendix J and specific storage/use/disposal requirements found on pesticide labels. Label directions are enforceable and vary widely. FIFRA requires a written notice of inspection and written receipt for samples collected.

- Determine types of pesticides used at the facility. Ask if any restricted use pesticides are used or stored at the facility.

- Determine use of pesticides.

- Determine certification status of facility/handlers

  - Check who certifies facility/pesticide handlers (EPA, State, DOD).
  - If restricted-use pesticides are used, check if pesticide handlers 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).
  - Check inventory records.
  - Check training records.
  - Check equipment repair records.

- Inspect storage, mixing/loading and container disposal areas.

  - Check location, ventilation, segregation, fire protection, security, shelter, warning signs and housekeeping of pesticide storage/handling areas.
  - Check mixing equipment/procedures for reducing handlers exposures to pesticides.
  - Check for safety equipment/procedures/use.
  - Check container cleanup and disposal procedures.

- Pesticide liquid waste disposal

  - Check to see that liquid pesticides are disposed of in accordance with applicable 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 K 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. 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. It must be noted that overall compliance is determined 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 attenton; however, no instructions or orders that repairs be undertaken should be issued. At this meeting, the inspectors may request

additional data, questions may be asked and answered, requested permit changes and process modifications are noted, and necessary receipts are given. The inspectors should make a final review of checklists and field notes before the conclusion of the visit. Field notes taken by the inspectors at the time of the field investigation should not be turned over to the Company officials. However, the inspectors are free to let Company officials know that they may request a copy of the final audit report through the EPA office which requested the audit.

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, coordinated, objective, clear and legible. The report serves to record the procedures used in gathering the data and gives factual observations and evaluations from the audit. This report 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 Analysis. 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: overall environmental compliance, adequacy of pollution control and treatment systems, adequacy of operation and maintenance practices, multi-media waste abatement needs, and followup action.

The Technical Analysis section comprehensively describes the inspection by discussing such topics as facility history, discussions with Company representatives, records reviewed, recordkeeping procedures, sampling programs, and specific problem areas. The Technical Analysis section correlates audit findings with the conclusions contained in the Executive Summary.

Where significant cases of noncompliance with a consent decree are discovered during the audit, the audit team and Regional office should coordinate at the earliest possible date with the appropriate field office of the Criminal Enforcement Division to discuss the potential for criminal charges - including criminal contempt - stemming from this noncompliance. 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.

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ACRONYMS

AQCR - Air Quality Control Region

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

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

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

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

NPDES - National Pollutant Discharge Elimination System

NSPS - New Source Performance Standards

OE - Office of Enforcement (now Office of Enforcement and Compliance Monitoring

O&M - Operation and Maintenance

ORM - Other Regulated Material

OSHA - Occupational Safety and Health Act

PCB - Polychlorinated Biphenyls

PMN - Premanufacture Notice

POTW - Publically-Owned Treatment Works

PSD - Prevention of Significant Deterioration

QA/QC - Quality Assurance/Quality Control

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

R&D - Research and Development

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

SIP - State Implementation Plan

SPCC - Spill, Prevention, Containment and Countermeasures

SSE - Stationary Source Enforcement

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

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APPENDIX A

SUMMARY OF POLLUTION CONTROL LEGISLATION

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).

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 most 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), and 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 civil or, in some cases, criminal action.

2. EPA may go directly to court seeking injunctive relief or civil penalty without using administrative procedures.

3. EPA may go directly to court seeking criminal sanctions without using administrative procedures. Criminal penalties are available for "knowing" or for "willful or negligent" violations.

4. EPA can attempt to obtain an emergency restraining order halting activity alleged to cause "an imminent and substantial endangerment" to the health of persons.

5. Emergency authority may be used until judicial authority is granted.

Additionally, the EPA can assess administrative penalties. These penalties will generally attempt to eliminate the economic advantage that may be enjoyed by a firm as a result of delaying installation of control equipment. The penalty calculation may involve comparing the cash flow which the source would have incurred if it had complied on time with the cash flow that will result if it does not comply. The EPA can also "blacklist" a company or party from entering into Federal contracts, loans and grants.

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* *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 two types of national air emission standards: New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAP). Special programs have also 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. 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. The Clean Air Act emphasizes five areas:

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 EPA 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. Rules are yet to be established by the States governing the sale or trade of these banked offsets (CAA, Part D).

CLEAN WATER 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 and renamed the Clean Water Act.

State Water Quality Standards and Water Quality Management Plans

Section 303 of the CWA authorized 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 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. 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). BPT was previously intended to be in place by industry in 1977 and BAT in 1983. Amendments to the CWA modified this schedule whereby a very limited BPT

extension was granted to 1979 and the BAT deadline was extended to between 1984 and 1987. The amendments divided all pollutants into three categories. "Conventional" pollutants shall meet BCT limitations by July 1984. "Toxic pollutants"* shall achieve BAT criteria by July 1987. Limitations on other pollutants shall be achieved no later than 3 years after limitations are established but not later than July 1987.

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.

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* *The 1977 amendments to the CWA define 129 pollutants as toxic.*

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, but which may instead be incorporated under the NPDES permit. 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 noncompliance, 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 permissable 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.

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.

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 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 flows 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. Regulations are still to be promulgated which will include expanded coverage in such areas as waste oil, underground tanks, etc. The act primarily deals with waste activities now and in the future. 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 imminent hazard. A review of the act and effective regulations by the inspector is imperative before the start of the inspection because of all these changes.

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

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 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 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 benefication 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. Materials intended to be reused or recycled have to meet tougher requirements in order to be regulated as hazardous wastes.

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.)

- July 8, 1987 - Land disposal of wastes listed in Section 3004(d)(2) 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.)

- 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 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 toxic commercial chemical wastes [261.33(e)] comprise a list of over 200

commercial chemical products and chemical intermediates by generic name. Substances become hazardous wastes when discarded. If a commercial chemical substance is on the list, its off-spec species and spill residues are also considered hazardous [40 CFR, Section 261.33(f)].

The overall listing further includes acutely toxic commercial chemical wastes, which are commercial chemical products and manufacturing chemical intermediates by generic name which are classified as hazardous wastes when discarded. If a substance is on this list, its off-spec species, spill residues and containers and inner liners (unless triple rinsed and effectively cleaned) are also considered hazardous [40 CFR, Section 261.33(e)].

Special Management Provisions

- Small Generators

  Small generators are defined as producing less than:
  1,000 kg/month of hazardous waste but greater than 100 kg/month

  Or in the case of acutely toxic wastes:

  1 kg/month of waste
  10 kg/month inner liners
  100 kg/month spill residues

  It is noted that the cut-off applies to the generator, not to each waste. Small generators must, however, still comply with two requirements:

  - Identify hazardous waste by list, testing or experience
  - Dispose of their hazardous waste in a RCRA-authorized TSDF either offsite or onsite

- Reuse or Recycling - See above

- Special Waste Class - A new class has been created: greater than 100 kg per month but less than 1,000 kg per month. By March 31, 1986, regulations are to be promulgated to cover this new class.

Beginning November 8, 1984, wastes fitting this class are to be sent to a TSDF which has a permit or interim status or are to be disposed of in a facility licensed, permitted or registered by a State.

By no later than August 4, 1985, wastes fitting the new class are to be manifested when shipped offsite (see checklist for new requirements).

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.

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* *40 CFR Part 262*

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).

Permit for Storage More Than 90 Days - If hazardous wastes are retained onsite more than 90 days, generator is subject to all requirements of TSDFs including need for 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.

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* *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 faciities 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)

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* 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 - Both used and recycled oil are to come under regulation by RCRA. EPA is to promulgate standards for recycled oil by November 8, 1985 and to decide by that same date if used oil is to be listed as a hazardous waste. Subsequent regulations are to be developed for its handling if the material is listed as a hazardous waste.

- 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

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT OF 1980 (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. A spill from 1 pound or any "reportable quantity" established pursuant to Section 311(b)(4) of the CWA must be reported. It is expected that this reportable quantity will be changed in the future.

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.

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. 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 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 manufacturers, 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 prepared in 1977. Secondary regulations were established in 1979 as guidelines to States to protect the non-health-related qualities of drinking water.

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 ¼ 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.

APPENDIX B
SAFETY PLAN

NEIC - SAFETY PLAN

PROJECT: _____ NO. _____

APPROVAL OHS Designee: _____ Date _____

Project Coordinator: _____ Date _____

Branch Chief: _____ Date _____

On Scene Coordinator: _____ Date _____

ACTIVITIES: _____

_____

_____

_____

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 _____

O_2 Depletion: Yes _____ No _____

Buried Utilities: Yes _____ No _____ If yes, Specify _____

LEVEL OF PROTECTION RECOMMENDED _____

Level A _____

Level B _____ Type SCBA _____

Level C _____ Type Cartridge _____

Level D _____

Enhancement _____

_____

* If unknown, mark UK

NEIC - SAFETY PLAN (Cont'd)
Page 2

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:

_____

_____

_____

_____

_____

_____

_____

COMMENTS: _____

_____

_____

_____

NEIC - SAFETY PLAN (Cont'd)
Page 3

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

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

NEW SOURCE PERFORMANCE STANDARDS (NSPS)*

Sources Covered

NSPS includes new and modified stationary sources in 42 industrial 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 conducted using prescribed reference methods	Yes ____	No ____
Within 180 days of startup	Yes ____	No ____
Written results sent to Agency	Yes ____	No ____

- Monitoring

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

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 ____

- Quarterly Reports

Reports on data, time and magnitude of excess emissions	Yes ____	No ____
Identification of excess emission periods associated with startup, shutdown and malfunction	Yes ____	No ____
Date and time when control equipment was repaired, adjusted or inoperative	Yes ____	No ____
Date and time when CEM was inoperative, nature of repairs	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 Da	August 17, 1971 September 18, 1978	Particulate matter, sulfur dioxide, nitrogen oxides
Municipal incinerators	E	August 17, 1971	Particulate matter
Portland cement plants	F	August 17, 1971	Particulate matter
Nitric acid plants	G	August 17, 1971	Nitrogen oxides
Sulfuric acid plants	H	August 17, 1971	Sulfur dioxide, acid mist (sulfuric acid)
Asphalt concrete plants	I	June 11, 1973	Particulate matter
Petroleum refineries	J	June 11, 1973	Particulate matter, carbon monoxide, sulfur dioxide
Storage vessels for petroleum liquids	K Ka	June 11, 1973 May 18, 1978	VOC
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 GG	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
Synthetic fiber plants	HHH	November 23, 1982	VOC
Petroleum refineries	GGG	January 4, 1983	Performance standards

Table D-2

NSPS SOURCES REQUIRING CEM

Source	Subpart	Effective Date	Monitor
FFFSG	D	8/17/71	opacity, SO_2, NO_x, O_2 or CO_2
Fossil-fuel-fired electric utilities	Da	9/18/78	opacity, SO_2, NO_x, O_2 or CO_2
Nitric acid plants	G	8/17/71	NO_x
Sulfuric acid plants	H	8/17/71	SO_2
Petroleum refineries (FBCCU)	J	6/11/73	opacity, CO, SO_2, H_2S
Claus sulfur recovery unit	J	10/4/76	opacity, CO, SO_2, H_2S
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	9/24/76	opacity, TRS
Lime manufacturing plants	HH	5/3/77	opacity
Phosphate rock plants	NN	9/21/79	opacity
Flexible vinyl and urethane coating and printing	FFF	1/18/83	VOC

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 ____

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* *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

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 (contd)

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 _____
Permit Stipulations	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)

Electrostatic Precipitators	Fabric Filters	Wet Scrubbers
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 _____		

C. Samples Taken (Describe) _____

D. Comments/Recommended Action _____

Inspector _____ Date _____

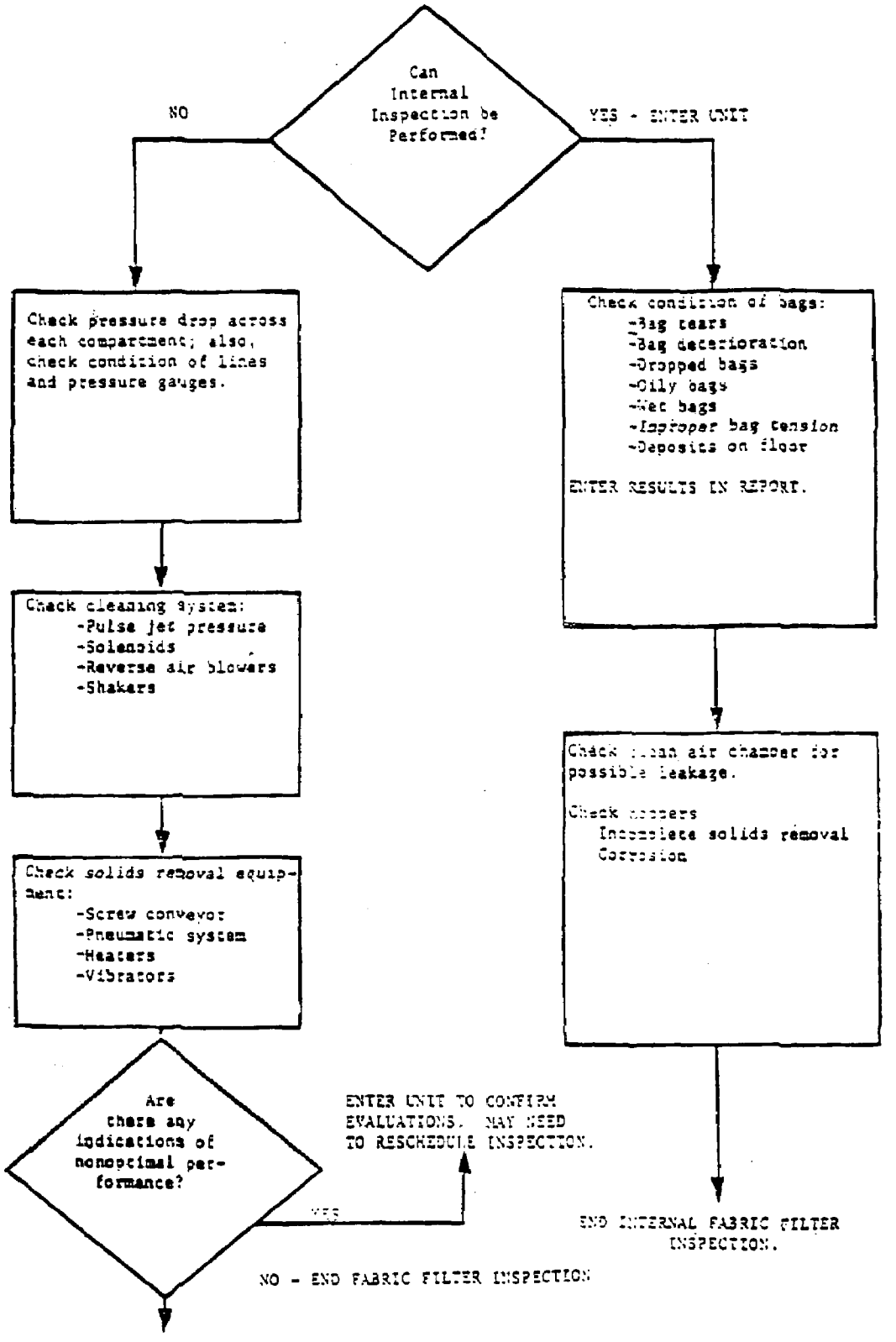

Figure D-1

Fabric Filter Insnection Flowsheet

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

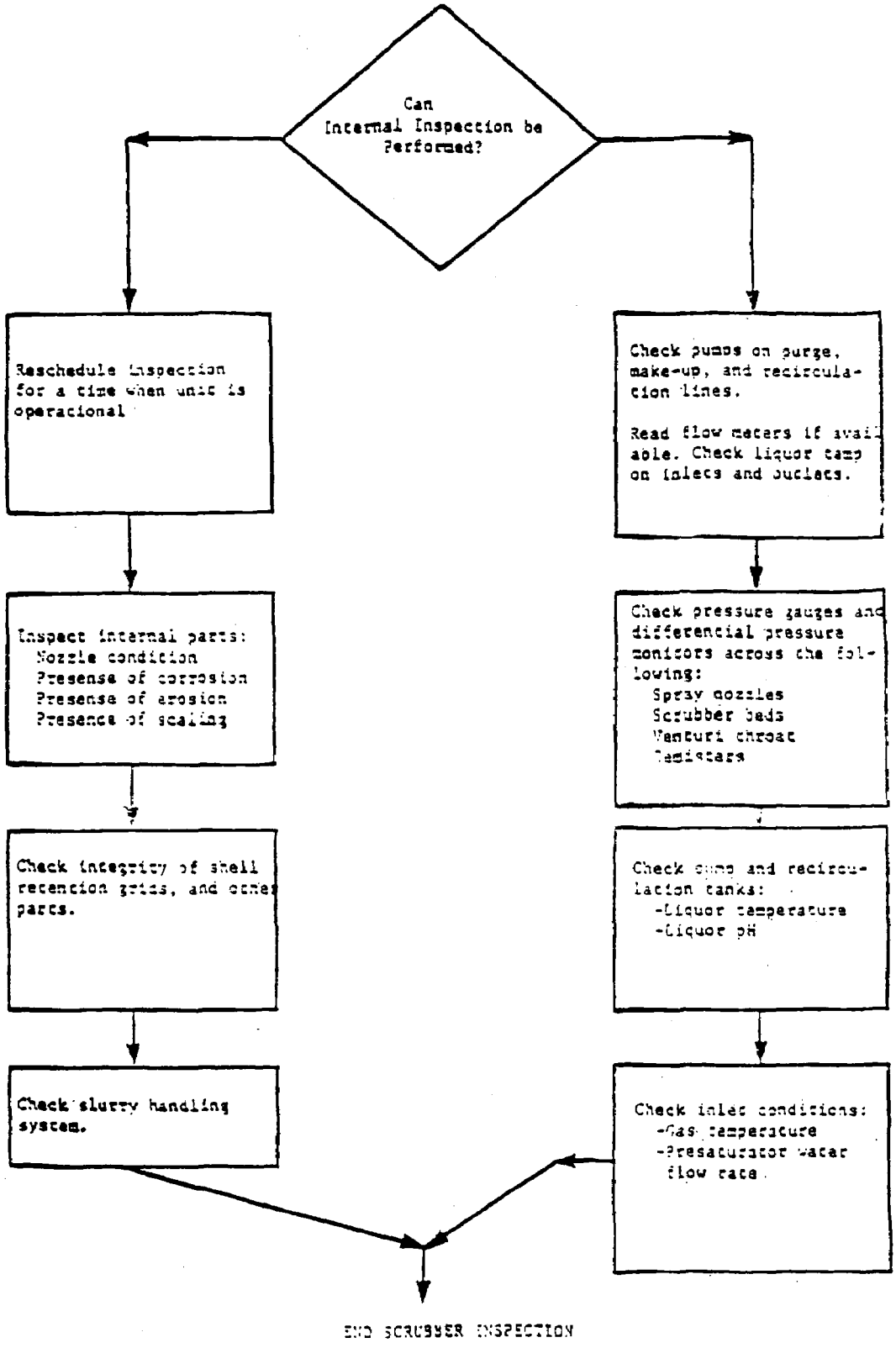

Figure D-2
Scrubber Inspection Flowsheet

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

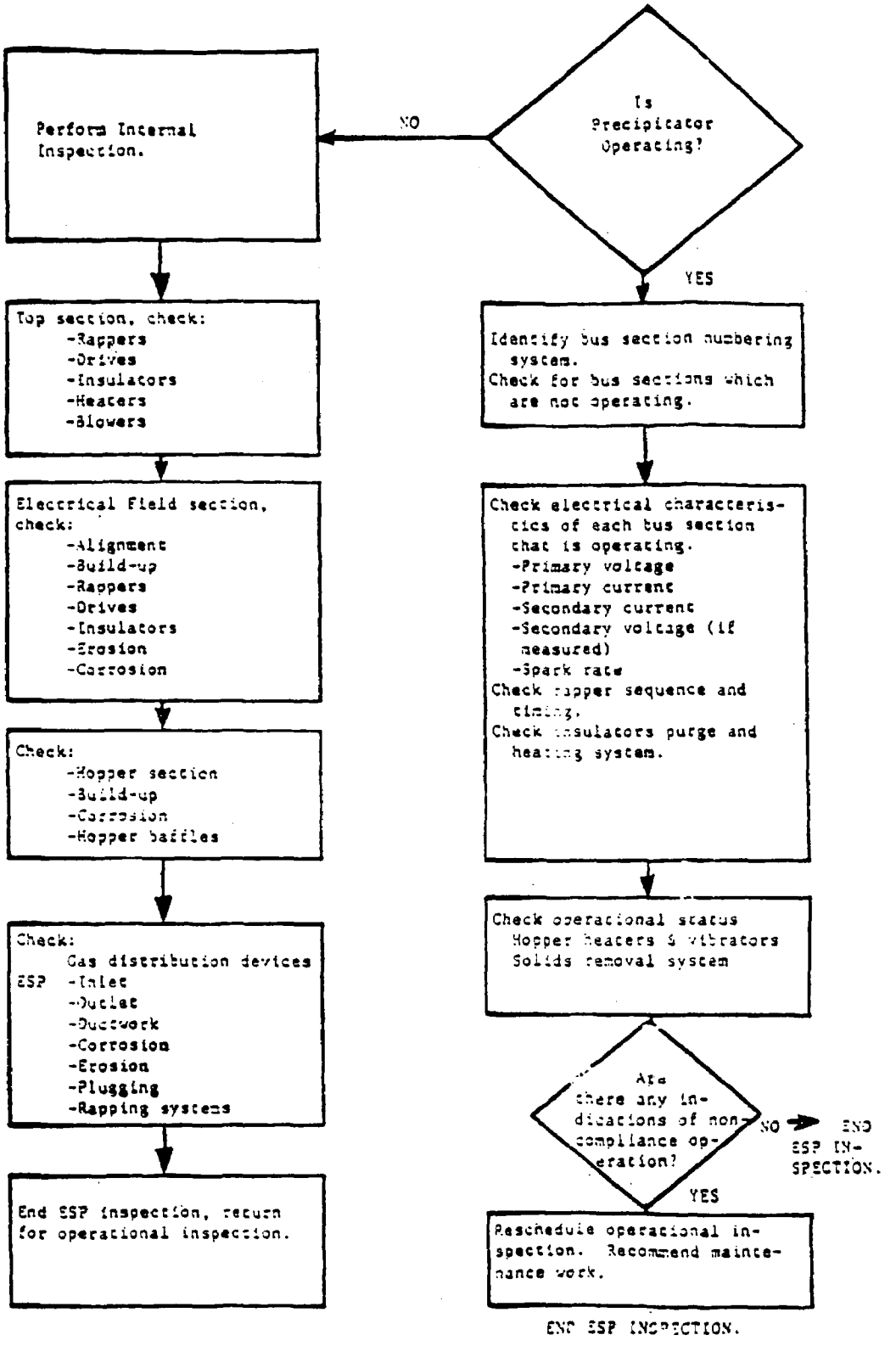

Figure D-3

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)

Form Approved
OMB No. 158-R0073

NPDES COMPLIANCE INSPECTION REPORT *(Coding Instructions on back of last page)*

TRANSACTION CODE		NPDES	YR MO DA	TYPE	INSPECTOR	FAC TYPE	TIME
1	2 (5)	3 – 11	12 – 17	18	19	20	a.m. / p.m.

REMARKS

21 – 64

ADDITIONAL

65 – 70

SECTION A · Permit Summary

NAME AND ADDRESS OF FACILITY *(Include County, State and ZIP code)*		EXPIRATION DATE
		ISSUANCE DATE
RESPONSIBLE OFFICIAL	TITLE	PHONE
FACILITY REPRESENTATIVE	TITLE	PHONE

SECTION B · Effluent Characteristics *(Additional sheets attached _____)*

PARAMETER/ OUTFALL		MINIMUM	AVERAGE	MAXIMUM	ADDITIONAL
	SAMPLE MEASUREMENT				
	PERMIT REQUIREMENT				
	SAMPLE MEASUREMENT				
	PERMIT REQUIREMENT				
	SAMPLE MEASUREMENT				
	PERMIT REQUIREMENT				
	SAMPLE MEASUREMENT				
	PERMIT REQUIREMENT				
	SAMPLE MEASUREMENT				
	PERMIT REQUIREMENT				

SECTION C · Facility Evaluation *(S = Satisfactory, U = Unsatisfactory, N/A = Not applicable)*

EFFLUENT WITHIN PERMIT REQUIREMENTS	OPERATION AND MAINTENANCE	SAMPLING PROCEDURES
RECORDS AND REPORTS	COMPLIANCE SCHEDULE	LABORATORY PRACTICES
PERMIT VERIFICATION	FLOW MEASUREMENTS	OTHER:

SECTION D · Comments

SECTION E · Inspection/Review

SIGNATURES	AGENCY	DATE
INSPECTED BY		
INSPECTED BY		
REVIEWED BY		

ENFORCEMENT DIVISION USE ONLY

COMPLIANCE STATUS

☐ COMPLIANCE

☐ NONCOMPLIANCE

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Sections F thru L: Complete on all inspections, as appropriate. N/A = Not Applicable	PERMIT NO.

SECTION F - Facility and Permit Background

ADDRESS OF PERMITTEE IF DIFFERENT FROM FACILITY *(Including City, County and ZIP code)*	DATE OF LAST PREVIOUS INVESTIGATION BY EPA/STATE
	FINDINGS

SECTION G - Records and Reports

RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT. ☐ YES ☐ NO ☐ N/A *(Further explanation attached _____)*
DETAILS:

(a) ADEQUATE RECORDS MAINTAINED OF:			
(i) SAMPLING DATE, TIME, EXACT LOCATION	☐ YES	☐ NO	☐ N/A
(ii) ANALYSES DATES, TIMES	☐ YES	☐ NO	☐ N/A
(iii) INDIVIDUAL PERFORMING ANALYSIS	☐ YES	☐ NO	☐ N/A
(iv) ANALYTICAL METHODS/TECHNIQUES USED	☐ YES	☐ NO	☐ N/A
(v) ANALYTICAL RESULTS *(e.g., consistent with self-monitoring report data)*	☐ YES	☐ NO	☐ N/A
(b) MONITORING RECORDS *(e.g., flow, pH, D.O., etc.)* MAINTAINED FOR A MINIMUM OF THREE YEARS INCLUDING ALL ORIGINAL STRIP CHART RECORDINGS *(e.g. continuous monitoring instrumentation, calibration and maintenance records)*.	☐ YES	☐ NO	☐ N/A
(c) LAB EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS KEPT.	☐ YES	☐ NO	☐ N/A
(d) FACILITY OPERATING RECORDS KEPT INCLUDING OPERATING LOGS FOR EACH TREATMENT UNIT.	☐ YES	☐ NO	☐ N/A
(e) QUALITY ASSURANCE RECORDS KEPT.	☐ YES	☐ NO	☐ N/A
(f) RECORDS MAINTAINED OF MAJOR CONTRIBUTING INDUSTRIES *(and their compliance status)* USING PUBLICLY OWNED TREATMENT WORKS.	☐ YES	☐ NO	☐ N/A

SECTION H - Permit Verification

INSPECTION OBSERVATIONS VERIFY THE PERMIT. ☐ YES ☐ NO ☐ N/A *(Further explanation attached _____)*
DETAILS:

(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE.	☐ YES	☐ NO	☐ N/A
(b) FACILITY IS AS DESCRIBED IN PERMIT.	☐ YES	☐ NO	☐ N/A
(c) PRINCIPAL PRODUCT(S) AND PRODUCTION RATES CONFORM WITH THOSE SET FORTH IN PERMIT APPLICATION.	☐ YES	☐ NO	☐ N/A
(d) TREATMENT PROCESSES ARE AS DESCRIBED IN PERMIT APPLICATION.	☐ YES	☐ NO	☐ N/A
(e) NOTIFICATION GIVEN TO EPA/STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES.	☐ YES	☐ NO	☐ N/A
(f) ACCURATE RECORDS OF RAW WATER VOLUME MAINTAINED.	☐ YES	☐ NO	☐ N/A
(g) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS DESCRIBED IN PERMIT.	☐ YES	☐ NO	☐ N/A
(h) CORRECT NAME AND LOCATION OF RECEIVING WATERS.	☐ YES	☐ NO	☐ N/A
(i) ALL DISCHARGES ARE PERMITTED.	☐ YES	☐ NO	☐ N/A

SECTION I - Operation and Maintenance

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED. ☐ YES ☐ NO ☐ N/A *(Further explanation attached _____)*
DETAILS:

(a) STANDBY POWER OR OTHER EQUIVALENT PROVISIONS PROVIDED.	☐ YES	☐ NO	☐ N/A
(b) ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE.	☐ YES	☐ NO	☐ N/A
(c) REPORTS ON ALTERNATE SOURCE OF POWER SENT TO EPA/STATE AS REQUIRED BY PERMIT.	☐ YES	☐ NO	☐ N/A
(d) SLUDGES AND SOLIDS ADEQUATELY DISPOSED.	☐ YES	☐ NO	☐ N/A
(e) ALL TREATMENT UNITS IN SERVICE.	☐ YES	☐ NO	☐ N/A
(f) CONSULTING ENGINEER RETAINED OR AVAILABLE FOR CONSULTATION ON OPERATION AND MAINTENANCE PROBLEMS.	☐ YES	☐ NO	☐ N/A
(g) QUALIFIED OPERATING STAFF PROVIDED.	☐ YES	☐ NO	☐ N/A
(h) ESTABLISHED PROCEDURES AVAILABLE FOR TRAINING NEW OPERATORS.	☐ YES	☐ NO	☐ N/A
(i) FILES MAINTAINED ON SPARE PARTS INVENTORY, MAJOR EQUIPMENT SPECIFICATIONS, AND PARTS AND EQUIPMENT SUPPLIERS.	☐ YES	☐ NO	☐ N/A
(j) INSTRUCTIONS FILES KEPT FOR OPERATION AND MAINTENANCE OF EACH ITEM OF MAJOR EQUIPMENT.	☐ YES	☐ NO	☐ N/A
(k) OPERATION AND MAINTENANCE MANUAL MAINTAINED.	☐ YES	☐ NO	☐ N/A
(l) SPCC PLAN AVAILABLE.	☐ YES	☐ NO	☐ N/A
(m) REGULATORY AGENCY NOTIFIED OF BY PASSING. *(Dates _____ _____)*	☐ YES	☐ NO	☐ N/A
(n) ANY BY-PASSING SINCE LAST INSPECTION.	☐ YES	☐ NO	☐ N/A
(o) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERIENCED. _____	☐ YES	☐ NO	☐ N/A

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SECTION J - Compliance Schedules

PERMITTEE IS MEETING COMPLIANCE SCHEDULE. ☐ YES ☐ NO ☐ N/A (Further explanation attached _____)

CHECK APPROPRIATE PHASE(S):

- ☐ (a) THE PERMITTEE HAS OBTAINED THE NECESSARY APPROVALS FROM THE APPROPRIATE AUTHORITIES TO BEGIN CONSTRUCTION.
- ☐ (b) PROPER ARRANGEMENT HAS BEEN MADE FOR FINANCING (mortgage commitments, grants, etc.).
- ☐ (c) CONTRACTS FOR ENGINEERING SERVICES HAVE BEEN EXECUTED.
- ☐ (d) DESIGN PLANS AND SPECIFICATIONS HAVE BEEN COMPLETED.
- ☐ (e) CONSTRUCTION HAS COMMENCED.
- ☐ (f) CONSTRUCTION AND/OR EQUIPMENT ACQUISITION IS ON SCHEDULE.
- ☐ (g) CONSTRUCTION HAS BEEN COMPLETED.
- ☐ (h) START-UP HAS COMMENCED.
- ☐ (i) THE PERMITTEE HAS REQUESTED AN EXTENSION OF TIME.

SECTION K - Self-Monitoring Program

Part 1 – Flow measurement (Further explanation attached _____)

PERMITTEE FLOW MEASUREMENT MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT. DETAILS:	☐ YES	☐ NO	☐ N/A
(a) PRIMARY MEASURING DEVICE PROPERLY INSTALLED.	☐ YES	☐ NO	☐ N/A
TYPE OF DEVICE: ☐ WEIR ☐ PARSHALL FLUME ☐ MAGMETER ☐ VENTURI METER ☐ OTHER (Specify _____)			
(b) CALIBRATION FREQUENCY ADEQUATE (Date of last calibration _____)	☐ YES	☐ NO	☐ N/A
(c) PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED AND MAINTAINED.	☐ YES	☐ NO	☐ N/A
(d) SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED.	☐ YES	☐ NO	☐ N/A
(e) FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOW RATES.	☐ YES	☐ NO	☐ N/A

Part 2 – Sampling (Further explanation attached _____)

PERMITTEE SAMPLING MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT. DETAILS:	☐ YES	☐ NO	☐ N/A
(a) LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.	☐ YES	☐ NO	☐ N/A
(b) PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT.	☐ YES	☐ NO	☐ N/A
(c) PERMITTEE IS USING METHOD OF SAMPLE COLLECTION REQUIRED BY PERMIT. IF NO, ☐ GRAB ☐ MANUAL COMPOSITE ☐ AUTOMATIC COMPOSITE FREQUENCY _____	☐ YES	☐ NO	☐ N/A
(d) SAMPLE COLLECTION PROCEDURES ARE ADEQUATE.	☐ YES	☐ NO	☐ N/A
(i) SAMPLES REFRIGERATED DURING COMPOSITING	☐ YES	☐ NO	☐ N/A
(ii) PROPER PRESERVATION TECHNIQUES USED	☐ YES	☐ NO	☐ N/A
(iii) FLOW PROPORTIONED SAMPLES OBTAINED WHERE REQUIRED BY PERMIT	☐ YES	☐ NO	☐ N/A
(iv) SAMPLE HOLDING TIMES PRIOR TO ANALYSES IN CONFORMANCE WITH 40 CFR 136.3	☐ YES	☐ NO	☐ N/A
(e) MONITORING AND ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT.	☐ YES	☐ NO	☐ N/A
(f) IF (e) IS YES, RESULTS ARE REPORTED IN PERMITTEE'S SELF-MONITORING REPORT.	☐ YES	☐ NO	☐ N/A

Part 3 – Laboratory (Further explanation attached _____)

PERMITTEE LABORATORY PROCEDURES MEET THE REQUIREMENTS AND INTENT OF THE PERMIT. DETAILS:	☐ YES	☐ NO	☐ N/A
(a) EPA APPROVED ANALYTICAL TESTING PROCEDURES USED. (40 CFR 136.3)	☐ YES	☐ NO	☐ N/A
(b) IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED.	☐ YES	☐ NO	☐ N/A
(c) PARAMETERS OTHER THAN THOSE REQUIRED BY THE PERMIT ARE ANALYZED.	☐ YES	☐ NO	☐ N/A
(d) SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT.	☐ YES	☐ NO	☐ N/A
(e) QUALITY CONTROL PROCEDURES USED.	☐ YES	☐ NO	☐ N/A
(f) DUPLICATE SAMPLES ARE ANALYZED. _____ % OF TIME.	☐ YES	☐ NO	☐ N/A
(g) SPIKED SAMPLES ARE USED. _____ % OF TIME.	☐ YES	☐ NO	☐ N/A
(h) COMMERCIAL LABORATORY USED.	☐ YES	☐ NO	☐ N/A
(i) COMMERCIAL LABORATORY STATE CERTIFIED.	☐ YES	☐ NO	☐ N/A

LAB NAME _____

LAB ADDRESS _____

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PERMIT NO.

SECTION L - Effluent/Receiving Water Observations *(Further explanation attached _____)*

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	VISIBLE FLOAT SOL	COLOR	OTHER

(Sections M and N: Complete as appropriate for sampling inspections)

SECTION M - Sampling Inspection Procedures and Observations *(Further explanation attached _____)*

- ☐ GRAB SAMPLES OBTAINED
- ☐ COMPOSITE OBTAINED
- ☐ FLOW PROPORTIONED SAMPLE
- ☐ AUTOMATIC SAMPLER USED
- ☐ SAMPLE SPLIT WITH PERMITTEE
- ☐ CHAIN OF CUSTODY EMPLOYED
- ☐ SAMPLE OBTAINED FROM FACILITY SAMPLING DEVICE

COMPOSITING FREQUENCY _____ PRESERVATION _____

SAMPLE REFRIGERATED DURING COMPOSITING: ☐ YES ☐ NO

SAMPLE REPRESENTATIVE OF VOLUME AND NATURE OF DISCHARGE _____

SECTION N - Analytical Results *(Attach report if necessary)*

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 ____

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: _____

APPENDIX F

RCRA CHECKLISTS

INSPECTION PROCEDURES FOR NON-NOTIFIERS

Inspections may be conducted to determine whether handlers of hazardous waste who have not notified under §3010 of RCRA should have done so. Steps that should be taken by the inspector to make this determination include:

- Request proof of a nonhazardous determination (this applies to generators) via written notice or site visit.

- If the generator is unable to satisfactorily demonstrate how such a determination was made, ask the generator to present data or records indicating:

  - Materials used and their quantity
  - Processes used
  - Product output and quantity of output
  - Waste stream produced and quantity
  - Byproducts created and quantity

- Evaluate the data to determine whether or not the generator produces hazardous waste in quantities regulated by the Act.

- If doubt still exists concerning the nature of the waste stream, take a representative sample of the waste stream and submit it for analysis.

Table F-1

RCRA INSPECTION CHECKLISTS*
RCRA COMPLIANCE INSPECTION REPORT
GENERATORS CHECKLIST

Note: On multiple part questions, circle those not in compliance.

Section A - EPA Identification No.

1. Does Generator have EPA ID No. (262.12 - EPA ID No.)? ____ Yes ____ No

   a. If yes, EPA ID No. _ _ _ _ _ _ _ _ _ _ _ _

Section B - Hazardous Waste Determination

1. Does generator generate hazardous waste(s) listed in Subpart D (261.30 - 261.33 - List of Hazardous Waste)? ____ Yes ____ No

   a. If yes, list wastes and quantities on attachment. (Include EPA Hazardous Waste No. Provide waste name and description.)

2. Does generator generate solid waste(s) that exhibit hazardous characteristics (corrosivity, ignitability, reactivity, EP toxicity) (261.20 - 261.24 - Characteristics of Hazardous Waste)? ____ Yes ____ No

   a. If yes, list wastes and quantities on attachment. (Include EPA Hazardous Waste No. Provide waste name and description.)

   b. Does generator determine characteristics by testing or by applying knowledge of processes? ____ 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 equivalent methods used.

3. Are there any other solid wastes deemed nonhazardous generated by generators (i.e., process waste streams, collected matter from air pollution control equipment, water treatment sludge, etc.)? ____ Yes ____ No

---

* *The checklists are to be used only as a guide and references should be made to both RCRA and the regulations (40 CFR Parts 260 through 256) for recent changes.*

a. If yes, did generator determine non-hazardous characteristics by testing or 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 equivalent methods used.

b. List wastes and quantities deemed nonhazardous or processes from which nonhazardous wastes were produced. Use narrative explanations sheet.

Section C - Manifest

1. Does generator ship hazardous waste offsite (Subpart B - The Manifest)? ____ Yes ____ No

a. If no, do not fill out Sections C and D.

b. If yes, identify primary offsite facility(ies). Use narrative explanations sheet.

2. Has generator shipped hazardous waste offsite since November 19, 1980? ____ Yes ____ No

3. Is generator exempted from regulation because of:

Small quantity generator (261.5 - Special requirements) ____ Yes ____ No

OR

Produces nonhazardous waste at this time (261.4 - Exclusions) ____ Yes ____ No

4. Is waste generated >100 kg/month, <1000 kg/month ____ Yes ____ No

a. Is waste shipped offsite in any quantity? ____ Yes ____ No

b. If yes, is waste manifested and does it include the following information (required by no later than August 4, 1985)?*

(1) Name and address of generator ____ Yes ____ No

(2) DOT waste description, including proper shipping name, hazard class and identification number or EPA identification number, generic waste description or hazardous waste characteristics? ____ Yes ____ No

---

* *Further information to be effective March 31, 1986.*

(3) Number and type of containers ____ Yes ____ No

(4) Quantity of waste transported ____ Yes ____ No

(5) Name and address of facility designated to receive the waste ____ Yes ____ No

c. Does facility designated to receive the waste have:

(1) RCRA permit? ____ Yes ____ No
(2) Interim Status? ____ Yes ____ No
(3) Permitted, licensed or registered by a State to manage municipal or industrial solid waste? ____ Yes ____ No

5. If not exempted, does generator use manifest (262.20 - General Requirements)? ____ Yes ____ No

a. If yes, is manifest EPA Form 8700-22 and, if necessary, EPA form 8700-22A (Uniform Hazardous Manifest) properly filled out (appendix to 40 CFR 262)? ____ Yes ____ No

b. Is the following certification on each manifest form (effective September 1, 1985)? ____ Yes ____ No

The generator of the hazardous waste has a program in place to reduce the volume or quantity and toxicity of such waste to the degree determined by the generator to be economically practicable and the proposed method of treatment, storage or disposal is that practicable method currently available to the generator which minimizes the present and future threat to human health and the environment.

6. Does generator retain copies of manifests? ____ Yes ____ No

(Check completed manifests at random. Indicate how many manifests were inspected, how many violations were noted and the type of violation.)

If yes, complete a through e. If questions contain more than one item, circle those not in compliance (263.23 - Use of the Manifest).

a. Did generator sign and date all manifests inspected? ____ Yes ____ No

Who signed for generator?

Name_____ Title _____

b. Did generator obtain handwritten signature and date of acceptance from initial transporter? ____ Yes ____ No

Who signed and dated for transporter?

Name_____ Title _____

c. Does generator retain one copy of manifest signed by generator and transporter? ____ Yes ____ No

d. Do returned copies of manifest include facility owner/operator signature and date of acceptance? ____ Yes ____ No

e. *If copy of manifest from facility was not* returned within 45 days, did generator file an exception report (262.42 - Exception Reporting)? ____ Yes ____ No

1. If yes, did it contain the following information?

Legible copy of manifest ____ Yes ____ No

AND

Cover letter explaining generator's efforts to locate waste. ____ Yes ____ No

f. Does (will) generator retain copies for 3 years? ____ Yes ____ No

Section D - Pre-Transport Requirements

1. Does generator package waste? ____ Yes ____ No

If no, skip the rest of Section D.
If yes, complete the following questions.

2. Does generator package waste in accordance with 49 CFR 173, 178 and 179 (DOT requirements, 262.30 - Packaging)? ____ Yes ____ No

3. Inspect containers to be shipped.

a. Are containers to be shipped leaking, corroding or bulging? ____ Yes ____ No

b. Use narrative explanations sheet to describe containers and condition.

c. Is there evidence of heat generation from incompatible wastes in the containers? ____ Yes ____ No

4. Does the generator use DOT labeling requirements in accordance with 49 CFR 172 (262.31 - Labeling)? ____ Yes ____ No

5. Does the generator mark each package in accordance with 49 CFR 172 (262.32 - Marking)? ____ Yes ____ No

6. Is each container of 100 gallons or less marked with the following label (262.32 - Marking)? ____ Yes ____ No

Label saying: 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 _____

_____

7. If there are any vehicles present onsite loading or unloading hazardous waste, inspect for presence of placards. Note this instance on narrative explanation sheet.

8. Accumulation time (262.34 - Accumulation Time)

   a. Is facility a permitted storage facility? ____ Yes ____ No

   If yes, skip to question 9. If no, answer rest of question 8.

   b. Is hazardous waste shipped offsite within 90 days? ____ Yes ____ No

   c. Are containers used to store waste? ____ Yes ____ No

      (1) Is the beginning date of accumulation time clearly indicated? ____ Yes ____ No

   c. (1) Does generator inspect containers for leakage or corrosion? (265.174 - Inspections)? ____ Yes ____ No

   d. (1) Does generator handle ignitable or reactive waste? ____ Yes ____ No

      (2) If yes, does generator locate containers holding ignitable or reactive waste at least 15 meters (50 feet) inside facility's property line? (265.176 - Special Requirements for Ignitable or Reactive Wastes)? ____ Yes ____ No

NOTE: If generator accumulates waste onsite for less 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 area. Use photos and narrative explanation sheet.

Section E - Recordkeeping and Records

1. Is generator keeping the following reports? (262.40 - Recordkeeping) (NOTE: The following must be kept for a minimum of three (3) years.)

   a. Manifests and signed copies from designated facilities? ____ Yes ____ No

b. Annual reports (not applicable until March 1982)? ____ Yes ____ No

c. Exception reports? ____ Yes ____ No

D. Test results, where applicable? ____ Yes ____ No

2. Where are records kept (at facility or elsewhere)? _____

_____

3. Who is in charge of keeping the records? Name: _____

Title: _____

Section F - Special Conditions

1. Has generator received from or transported to a foreign source any hazardous waste (262.50 - International Shipments)? ____ Yes ____ No

If yes,

a. Has he filed a notice with the R.A.? ____ Yes ____ No

b. Is this waste manifested and signed by foreign consignee? ____ Yes ____ No

c. If generator transported wastes out of the country, has he received confirmation of delivered shipment? ____ 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

   a. If yes, EPA No. _____

2. Does more than one location use this identification number? ____ Yes ____ No

   a. If yes, how many? _____

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

   If yes, identify State permit number: _____
   identify 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

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

   a. 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

   a. If not, complete "RCRA Facility Checklist".

C. Manifest and Recordkeeping Requirements

1. Are all shipments of hazardous wastes accompanied by an approved manifest (EPA Form 8700-22 and EPA Form 8700-22A)? ____ Yes ____ No

2. Does all required information appear on the manifest? ____ Yes ____ No

3. Identify number of manifests inspected and give narrative explanation of deficiencies.

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 copies of shipping papers for 3 years? ____ 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

      (4) Retain one copy of manifest and rail shipping papers? ____ Yes ____ No

(5) Assure 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 keep 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. Pre-transport 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? ____ Yes ____ No

b. Has the generator packaged wastes in repacks? ____ Yes ____ No

c. Has the generator labeled wastes in accordance with DOT requirements? ____ Yes ____ No

d. Has the generator marked wastes in accordance with DOT requirements? ____ 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

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) _____

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? ____ Yes ____ No

7. Complete portions on A, B and C parts as apply? ____ Yes ____ No

8. Did generator have to repackage wastes by truck driver's request? ____ Yes ____ No

9. Is truck driver aware of any special handling of materials? ____ Yes ____ No

10. Does truck driver have the National Response Center phone number accessible? ____ Yes ____ No

COMMENTS: _____

_____

_____

_____

_____

_____

_____

_____

_____

Table F-3
RCRA COMPLIANCE INSPECTION REPORT
TSD FACILITIES CHECKLIST FOR INTERIM STATUS FACILITIES

Section A - General Facility Standards

1. Does facility have EPA identification number (265.11 - Identification Number)? ____ Yes ____ No

   a. If yes, EPA identification number: _____

   If no, explain: _____

   _____

   _____

2. Has facility received hazardous waste from a foreign source (265.12 - Required Notices)? ____ Yes ____ No

   a. If yes, has he filed a notice with the Regional Administrator? ____ Yes ____ No

Waste Analysis

3. Does the facility have a written waste analysis plan (265.13 - General Waste Analysis)? ____ Yes ____ No

   a. If yes, is a copy maintained at the facility? ____ Yes ____ No
   If no, question 4 not applicable.

4. If yes, does it include:

   a. Parameters for which each waste will be analyzed? ____ Yes ____ No

   b. Test methods used to test for these parameters? ____ Yes ____ No

   c. Sampling method used to obtain sample? ____ Yes ____ No

   d. 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

   e. (For offsite facilities) Waste analyses that generators have agreed to supply? ____ Yes ____ No

   f. (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

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 - Security)? ____ Yes ____ No

If no, describe inadequacies. (Use narrative explanation sheet.)

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: _____

_____

Include a drawing indicating any inadequacies in the facility's security system.

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

NOTE: The sign must 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 (265.25 - General Inspection Requirements)? ____ 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 these inspections conducted? ____ Yes ____ No

(a) Is a record of these inspections maintained in the inspection log? ____ Yes ____ No

8. Does the owner/operator have an inspection log (265.15 - General Inspection Requirements)? ____ Yes ____ No

a. If yes, does it include:

(1) Date and time of inspection? ____ Yes ____ No

(2) Name of inspector? ____ Yes ____ No

(3) Notation of observations? ____ Yes ____ No

(4) Date and nature of repairs or remedial action? ____ Yes ____ No

B. Are there any malfunctions or other deficiencies noted in the inspection log that remain uncorrected? Use narrative explanation sheet. ____ Yes ____ No

C. Are records of the inspection log maintained at the facility for 3 years? ____ Yes ____ No

Personnel Training

9. Does the owner/operator maintain a personnel training program (266.16 - Personnel Training) ____ 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

B. 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

Requirements for Ignitable, Reactive or Incompatible Waste

10. Does facility handle ignitable or reactive waste (265.17 - Ignitable, Reactive, Incompatible Wastes)? ____ Yes ____ No

a. If yes, is waste separated and confined from sources if ignition or reaction (open flames, smoking, cutting and welding, hot surfaces, frictional heat), sparks

(static, electrical or mechanical), spontaneous ignition (e.g., from heat producing chemical reactions) and radiant heat? ____ Yes ____ No

b. Are smoking and open flames confined to specifically designated locations? ____ Yes ____ No

c. Are "No Smoking" signs posted in hazardous areas where ignitable or reactive wastes are handled? ____ Yes ____ No

11. Check containers (265.17 - Ignitable, Reactive, Incompatible Wastes).

a. Are containers leaking, corroding or bulging? ____ Yes ____ No

Use narrative explanation sheet to explain 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 of contamination of the environment (265.31 - Maintenance and operation of facility)? ____ Yes ____ No

If yes, use narrative explanation sheet to explain.

2. Is the facility equipped with (265.32 - Required Equipment)?

a. Internal communications or alarm system? ____ Yes ____ No

(1) Is it easily accessible in case of emergency? ____ 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 to assure its proper operation? ____ Yes ____ No

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 (e.g., adequate aisle space in between barrels to check for leakage, corrosion and proper labeling, etc.) (265.35 - Required Aisle Space)? ____ Yes ____ No

4. Has the owner/operator made arrangements with the local authorities to familiarize them with characteristics of the facility (layout of facility, properties of hazardous waste handled and associated hazards, places where facility personnel would normally be working, entrances to roads inside facility, possible evacuation routes) (265.37 - Arrangements with Local Authorities)? ____ 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 - Arrangements with Local Authorities)? ____ Yes ____ No

If yes, indicate primary authority: _____

A. Is the fire department a city or volunteer 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 - Arrangements with Local Authorities)? ____ 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 - Arrangements with Local Authorities)? ____ Yes ____ No

8. If the State or local authorities decline to enter into the above-referenced agreements, has this situation been entered in the operating record (265.37 - Arrangements with Local Authorities)? ____ Yes ____ No

Section C - Contingency Plan and Emergency Procedures

1. Does the facility have a contingency plan (265.52 - Content of Contingency Plan)? ____ 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 - Copies of Contingency Plan)? ____ Yes ____ No

3. Has a copy been supplied to local police and fire departments (265.53 - Copies of Contingency Plan)? ____ Yes ____ No

4. Is the plan a revised SPCC plan (265.52 - Contents of Contingency Plan)? ____ 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 - Use of Manifest System)? ____ Yes ____ No

   a. *If no, questions 1, 2 and 3 not applicable.*

   b. If yes, does the facility retain copies of all manifests? ____ Yes ____ No

      (1) Is the uniform manifest used? ____ Yes ____ No

(2) Are the manifests signed, dated and returned to the generator? ____ Yes ____ No

(3) Is a signed copy given to the transporter? ____ Yes ____ No

2. Has the facility received any hazardous waste from a rail or water (bulk shipment) transporter since November 19, 1980 (265.71 - Use of Manifest System)? ____ Yes ____ No

a. If yes, is it accompanied by a shipping paper? ____ Yes ____ No

(1) Does the owner/operator sign and date the shipping paper and return 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 - Manifest Discrepancies)? ____ 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 - Unmanifested Waste Report)? ____ Yes ____ No

a. If yes, has he submitted an unmanifested waste report to the Regional Administrator? ____ Yes ____ No

5. Does the facility have a written operating record (265.73 - Operations Record)? ____ 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 at each location? ____ Yes ____ No

(a) Is this information cross-referenced with specific manifest document numbers, if applicable? ____ Yes ____ No

(3) (For disposal facilities only) Is the location and quantity of each hazardous waste recorded on a map or diagram of each cell or disposal area? ____ Yes ____ No

(4) Record and results of waste analyses? ____ Yes ____ No

(5) Reports of incidents involving implementation of the contingency plan (if applicable)? ____ Yes ____ No

(6) Records and results of required inspections? ____ Yes ____ No

(7) Monitoring, testing or analytical data where required? ____ Yes ____ No

(8) Closure cost estimates and, for disposal facilities, post-closure cost estimates? ____ Yes ____ No

Section E - Plans and Reports

1. Have all plans and reports been visually inspected and/or been made available for inspection (265.74 - Availability, Retention and Disposition of Records)? ____ 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

   a. If yes, indicate which are hazardous waste facilities on the drawing.

3. Indicate types of hazardous waste facilities.

   _____ Groundwater Monitoring Program (Subpart F)
   _____ Containers (Subpart I)
   _____ Tanks (Subpart J)
   _____ Surface Impoundments (Subpart K)
   _____ Waste Piles (Subpart L)
   _____ Land Treatment (Subpart M)
   _____ Landfill (Subpart N)
   _____ Incinerator (Subpart O)
   _____ Thermal Treatment (Subpart P)
   _____ Chemical, Physical and Biological Treatment (Subpart Q)
   _____ Underground Injection (Subpart R)

Table F-4

GROUNDWATER MONITORING FOR PRE-JULY 26, 1982 SITES

1. Has the facility implemented a groundwater monitoring program? ____ Yes ____ No

2. Has a waiver demonstration been prepared? ____ Yes ____ No

   a. Does it describe the potential for migration of waste from the unit to the uppermost aquifer? ____ Yes ____ No

   b. Does it describe the potential for waste movement to a water supply or surface water? ____ Yes ____ No

   c. Is it certified by a qualified geologist or geotechnical engineer? ____ Yes ____ No

3. Has an alternate groundwater monitoring system been designed? ____ Yes ____ No

   a. Is it certified by a qualified geologist or geotechnical engineer? ____ Yes ____ No

   b. Does it determine the rate and extent of waste migration? ____ Yes ____ No

   c. Does it determine the combinations of waste in the groundwater? ____ Yes ____ No

   d. Has a groundwater quality assessment report been submitted? ____ Yes ____ No

   e. Are groundwater determinations (b) and (c) above made quarterly? ____ Yes ____ No

   f. Are records retained showing results of analyses and evaluations? ____ Yes ____ No

   g. Is an annual report submitted March 1? ____ Yes ____ No

4. Obtain or review available geologic/hydrogeologic information.

5. Obtain a site map identifying the following:

   a. Location of regulated unit(s)
   b. Groundwater contours
   c. Groundwater flow rate and direction
   d. Monitoring well locations, depths and size
   e. Location of compliance point(s)
   f. Geology of the area

g. Proximity of unit(s) to surface waters
h. Areas of groundwater recharge and discharge

6. Review well construction.

a. Well(s) properly screened ____ Yes ____ No
b. Well(s) properly packed ____ Yes ____ No
c. Well(s) properly sealed ____ Yes ____ No
d. Well(s) in uppermost aquifer ____ Yes ____ No

7. Review compliance point location.

a. Well downgradient of regulated unit ____ Yes ____ No
b. Well in uppermost aquifer ____ Yes ____ No
c. Well under hydraulic influence of regulated unit ____ Yes ____ No

8. Review upgradient wells.

a. Well(s) under hydraulic influence of regulated unit ____ Yes ____ No
b. Three or more in place ____ Yes ____ No
c. Wells in uppermost aquifer ____ Yes ____ No
d. Well locations will characterize background ____ Yes ____ No

9. Review sampling and analysis procedures plan.

a. Sample collection adequately described ____ Yes ____ No
b. Sample preservation adequately described ____ Yes ____ No
c. Sample shipping adequately described ____ Yes ____ No
d. Analytical procedures described or identified ____ Yes ____ No
e. Approved procedures used ____ Yes ____ No
f. Sample chain-of-custody adequate ____ Yes ____ No
g. Quality assurance/control program outlined ____ Yes ____ No
h. Detection levels identified for each parameter ____ Yes ____ No
i. Sampling performed quarterly ____ Yes ____ No
j. Are parameters to be analyzed those found in 40 CFR 265.92(b)? ____ Yes ____ No

10. Is each well sampled quarterly for 1 year? ____ Yes ____ No

11. Are a minimum of four samples used to determine background? ____ Yes ____ No

12. Have background levels been established for each parameter? ____ Yes ____ No

13. Is groundwater surface elevation determined at each sampling? ____ Yes ____ No

14. Is background based on quarterly sampling for a year? ____ Yes ____ No

15. Is the approved statistical test used? ____ Yes ____ No

16. Has a groundwater assessment program been prepared? ____ Yes ____ No

    a. Can it determine if waste has entered the groundwater? ____ Yes ____ No
    b. Can it determine the rate and extent of migration? ____ Yes ____ No
    c. Can it determine the concentrations of waste in the groundwater? ____ Yes ____ No

17. Have any statistical increases (decreases for pH) appeared in background? ____ Yes ____ No

    a. Was a report submitted showing difference? ____ Yes ____ No
    b. Are annual reports submitted each March 1? ____ Yes ____ No

18. Have any statistical increases (decreases for pH) appeared downgradient? ____ Yes ____ No

    a. Was statistical difference verified by sampling? ____ Yes ____ No
    b. Was RA or State notified of the statistical difference? ____ Yes ____ No
    c. Was an assessment plan submitted? ____ Yes ____ No
    d. Was the assessment plan submitted within 15 days of (b)? ____ Yes ____ No
    e. Does the assessment action plan follow the requirements of 40 CFR 265.93(d)(3)? ____ Yes ____ No

Table F-5

GROUNDWATER MONITORING CHECKLIST FOR
FACILITIES RECEIVING WASTE AFTER JULY 26, 1982

1. Obtain or review available geologic/hydrogeologic information.

2. Obtain a site map identifying the following:

   a. Location of regulated unit(s)
   b. Groundwater contours
   c. Groundwater flow rate and direction
   d. Monitoring well locations, depths and size
   e. Location of compliance point(s)
   f. Geology of the area
   g. Proximity of unit(s) to surface waters
   h. Areas of groundwater recharge and discharge

3. Review well construction.

a.	Well(s) properly screened	____ Yes	____ No
b.	Well(s) properly packed	____ Yes	____ No
c.	Well(s) properly sealed	____ Yes	____ No
d.	Well(s) in uppermost aquifer	____ Yes	____ No

4. Review compliance point location.

a.	Well downgradient of regulated unit	____ Yes	____ No
b.	Well in uppermost aquifer	____ Yes	____ No
c.	Well under hydraulic influence of regulated unit	____ Yes	____ No

5. Review upgradient wells.

a.	Well(s under hydraulic influence of regulated unit	____ Yes	____ No
b.	Three or more in place	____ Yes	____ No
c.	Wells in uppermost aquifer	____ Yes	____ No
d.	Well locations will characterize background	____ Yes	____ No

6. Review sampling and analysis procedures plan.

a.	Sample collection adequately described	____ Yes	____ No
b.	Sample preservation adequately described	____ Yes	____ No
c.	Sample shipping adequately described	____ Yes	____ No
d.	Analytical procedures described or identified	____ Yes	____ No
e.	Approved procedures used	____ Yes	____ No
f.	Sample chain-of-custody adequate	____ Yes	____ No
g.	Quality assurance/control program outlined	____ Yes	____ No
h.	Detection levels identified for each parameter	____ Yes	____ No
i.	Sampling performed quarterly	____ Yes	____ No
j.	Are parameters to be analyzed those formulas found in 40 CFR 265.92(b)?	____ Yes	____ No

7. Is each well sampled quarterly? ____ Yes ____ No

8. Are a minimum of four samples used to determine background? ____ Yes ____ No

9. Have background levels been established for each parameter? ____ Yes ____ No

10. Is groundwater surface elevation determined at each sampling? ____ Yes ____ No

11. Is background based on quarterly sampling for a year? ____ Yes ____ No

12. Is the approved statistical test used? ____ Yes ____ No

13. Has a groundwater assessment program been prepared? ____ Yes ____ No

    a. Can it determine if waste has entered the groundwater? ____ Yes ____ No
    b. Can it determine the rate and extent of migration? ____ Yes ____ No
    c. Can it determine the concentrations of waste in the groundwater? ____ Yes ____ No

14. Have any statistical increases (decreases for pH) appeared in background? ____ Yes ____ No

    a. Was a report submitted showing differences? ____ Yes ____ No
    b. Are annual reports submitted each March 1? ____ Yes ____ No

15. Have any statistical increases (decreases for pH) appeared downgradient? ____ Yes ____ No

    a. Was statistical difference verified by sampling? ____ Yes ____ No
    b. Was RA or State notified of the statistical difference? ____ Yes ____ No
    c. Was corrective action plan submitted? ____ Yes ____ No
    d. Was corrective action plan submitted within 15 days of (b)? ____ Yes ____ No
    e. Does the corrective action plan follow the requirements of 40 CFR 264.100? ____ Yes ____ No

16. Are the following records kept at the facility?

    a. Analysis of all well sampling ____ Yes ____ No
    b. Well groundwater elevations ____ Yes ____ No
    c. The statistical evaluation for each well ____ Yes ____ No

17. Is the following information reported?

a.	The quarterly analysis for background wells during first year	____ Yes ____ No
b.	The annual analyses for all wells and the evaluation	____ Yes ____ No
c.	Results of groundwater surface elevation evaluations	____ Yes ____ No

Table F-6

CONTAINER STORAGE CHECKLIST
(Subpart I - Use and Management of Containers 265.170)

1. Does the facility store hazardous waste in containers?____ Yes ____ No

2. Are the containers in good condition (check for leaks, corrosion, bulges, etc.)? ____ Yes ____ No

   If no, explain in narrative and document with photograph.

3. If a container is found to be leaking, does the operator transfer the hazardous waste from the leaking container? ____ Yes ____ No

4. Is the waste compatible with the containers and/or its liner? ____ Yes ____ No

   If no, explain in narrative.

5. Are the stored containers closed? ____ Yes ____ No

   If no, explain in narrative.

6. Are containers holding hazardous waste opened, handled or stored in such a manner as to cause the container to rupture or leak? ____ Yes ____ No

7. Are each of the containers inspected at least weekly? ____ Yes ____ No

   If no, explain in the narrative the frequency of inspection.

8. Are containers holding ignitible 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.

9. Are incompatible wastes stored in the same containers?____ Yes ____ No

10. Are containers holding incompatible wastes kept apart by physical barrier or sufficient distance? ____ Yes ____ No

    If no, explain in narrative.

Table F-7

TANKS CHECKLIST
(Subpart J - Tanks, 265.190)

NOTE: If multiple tanks exist, list each tank and specify compliance or noncompliance. Complete an individual checklist for each tank not in compliance and a collective checklist for those in compliance.

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, check 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.

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 trail 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 (NOTE: This section does not exclude underground tanks.)

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. 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

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? ____ Yes ____ No

       (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.).

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-8

SURFACE IMPOUNDMENTS CHECKLIST
SUBPART K - SURFACE IMPOUNDMENTS 265.220

NOTE: *Check all surface impoundments. Fill out one checklist for* any impoundment in violation. Fill out one checklist for all other impoundments in compliance. Indicate number of surface impoundments at the facility.

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. Does the impoundment appear to maintain at least 2 feet (60 cm) of freeboard? ____ Yes ____ No

   a. If no, what was the freeboard? _____

4. Is there evidence of overtopping of the dike? ____ Yes ____ No

   If yes, please describe. _____

   _____

5. Does the impoundment have a containment system? ____ Yes ____ No

   a. Does the earthen dike 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. Provide description of containment. _____

   _____

6. What wastes are treated or stored in the impoundment? Use narrative explanations sheet.

7. 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

8. Is the impoundment inspected daily to check freeboard level? ____ Yes ____ No

9. Is the impoundment, dike and vegetation surrounding the dike inspected to detect leaks, deterioration or failures at least once a week (265.226 - Inspections)? ____ Yes ____ No

10. Does the facility maintain a record of the closure plan on site? ____ Yes ____ No

11. Are ignitable or reactive wastes placed in the impoundment? ____ Yes ____ No

a. If no, do not complete b and c.
b. If yes, are they treated, rendered or mixed before or immediately after placement in the impoundment so it no longer meets the definition of ignitable or reactive? ____ Yes ____ No

OR

c. Is the impoundment used solely for emergencies? ____ Yes ____ No

(1) If yes, has further treatment, storage or disposal been conducted on these wastes? Describe this situation.

_____

_____

12. 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.).

13. What is the impoundment lined with? _____

14. Does the impoundment solely neutralize corrosive waste or waste listed in Subpart I solely because of corrosivity? ____ Yes ____ No

15. Did the impoundment receive waste after July 26, 1982? ____ Yes ____ No

If yes, fill out Groundwater Monitoring Checklist B.

a. If yes, is no other hazardous waste in the impoundment? ____ Yes ____ No

b. Has a demonstration been made that the waste is neutralized so that no corrosive waste migrates from the impoundment? ____ Yes ____ No

c. Has the demonstration been certified by a qualified professional? ____ Yes ____ No

If any of the above are answered no, the groundwater monitoring program cannot be waived.

Table F-9

WASTE PILES CHECKLIST
(Subpart L - Waste Piles, 265.250)

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

1. Did the unit receive hazardous waste after July 26, 1982? ____ Yes ____ No

   If yes, fill out Groundwater Monitoring Checklist B.

2. Is the pile containing hazardous waste protection from wind? ____ Yes ____ No

3. 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

4. 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) Runon diversion? ____ Yes ____ No
      (3) Leachate and runoff collection? ____ Yes ____ No

   OR

   b. Is the pile protected from precipitation and runon by some other means? ____ Yes ____ No

   OR

   c. 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

(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 runon 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-10

LAND TREATMENT CHECKLIST
(Subpart M - Land Treatment 265.270)

1. Did the unit receive hazardous waste after July 26, 1982? ____ Yes ____ No

   If yes, fill out Groundwater Monitoring Checklist B.

2. Is runon diverted away from the land treatment facility? ____ Yes ____ No

3. Is runoff from the land treatment facility collected? ____ Yes ____ No

4. 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. _____

5. Is wind dispersal controlled? ____ Yes ____ No

6. What hazardous wastes are treated at the land treatment facility? Use narrative explanation sheet.

   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 toxic because of the extraction procedure, what are the concentrations of the following?

	Concentration	Waste
Arsenic		
Barium		
Cadmium		
Chromium		
Lead		

	Concentration	Waste
Mercury		
Selenium		
Silver		
Endrin		
Lindane		
Methoxychlor		
Toxaphene		
2,4 D		
2,4,5-TP Silvex		

7. Obtain a copy of the land treatment process and include it with the report.

8. Are food chain crops grown? ____ Yes ____ No

   a. 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 ____ Yes ____ 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? ____ Yes ____ No

   b. Is the following information used for making this above demonstration and is it kept at the facility?

      (1) Tests for specific wastes and application rates being used at the facility ____ Yes ____ No

      (2) Crop characteristics ____ Yes ____ No

      (3) Soil characteristics ____ Yes ____ No

      (4) Sample selection criteria ____ Yes ____ No

      (5) Sample size determination ____ Yes ____ No

      (6) Analytical methods used ____ Yes ____ No

      (7) Statistical procedures ____ Yes ____ No

9. Was the Regional Administrator notified by January 19, 1981 that food chain crops had been or would be grown at the facility? ____ Yes ____ No

10. Does the facility treat wastes that contain cadmium? ____ Yes ____ No

    a. If no, go to question 11.

    b. If yes, list these wastes. Use narrative explanation sheet.

    c. Was the pH of the soil and waste mixture 6.5 or greater at the time of each waste application? ____ Yes ____ No

        (1) If the pH was less than 6.5, did the waste contain cadmium concentrations of 2 mg/kg or less? ____ Yes ____ No

    d. Is the annual application rate of cadmium less than .15 kg/ha (hilograms per hectare) for the following: tobacco, leafy vegetables, or root crops grown for human consumption? ____ Yes ____ No

        (1) For all other food chain crops, is the annual cadmium application rate less than 2.0 kg/ha (until June 30, 1984)? ____ Yes ____ No

11. Does the plan include:

    a. Soil monitoring? ____ Yes ____ No
    b. Soil pore water monitoring (water above the saturated zone)? ____ Yes ____ No
    c. Sample depths below waste incorporation? ____ Yes ____ No
    d. Number of samples to be taken? ____ Yes ____ No
    e. Frequency and time of sampling? ____ Yes ____ No
    f. Analysis of samples? ____ Yes ____ No

    Continue to g if facility received waste after July 26, 1982.

    g. Analysis for all parameters identified by 40 CFR 265.273 (a) and (b)? ____ Yes ____ No
    h. Sample locations and depths? ____ Yes ____ No

12. Does implementation of the plan yield:

    a. Background soil-pore liquid quality and chemical makeup of soil not affected by treatment zone leakage? ____ Yes ____ No

    b. The quality of soil-pore liquid and chemical makeup of soil below the treatment zone? ____ Yes ____ No

13. Have background levels been established? ____ Yes ____ No

14. Is monitoring occurring in the soil-pore zone immediately below the treatment zone? ____ Yes ____ No

15. Has a sampling and analysis plan been prepared and does it include:

    a. Sample collection techniques? ____ Yes ____ No

    b. Sample preservation and shipment? ____ Yes ____ No

    c. Analytical procedures? ____ Yes ____ No

    d. Chain-of-custody control? ____ Yes ____ No

16. Has a statistically significant change over background been found? ____ Yes ____ No

    a. Has the RA or State been notified if yes ? ____ Yes ____ No

    b. Have operating practices been modified? ____ Yes ____ No

17. Is the following information (for each hazardous waste) kept at the facility?

    a. Application dates ____ Yes ____ No
    b. Application rates ____ Yes ____ No
    c. Quantities ____ Yes ____ No
    d. Waste location ____ Yes ____ No

18. Does the facility have a closure/post-closure plan? ____ Yes ____ No

    a. If yes, where is it kept? _____

19. 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.

20. 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-11
LANDFILLS CHECKLIST
(Subpart N - Landfills, 265.300)

1. Did the unit receive waste after July 26, 1982? ____ Yes ____ No

2. Is runoff from the landfill collected? ____ Yes ____ No

   a. Is the waste from the collected runoff analyzed to determine if it is a hazardous waste? ____ Yes ____ No

      (1) If it is a hazardous waste, how is it managed? (Use narrative explanation sheet.)

      (2) Is the collected runoff discharged through a point source to surface waters? ____ Yes ____ No

         (a) If yes, list NPDES permit number _____

3. Is the landfill managed so that wind dispersal is controlled? (Note blowing debris.) ____ Yes ____ No

4. 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

AND

   b. Contents of each cell and the approximate location of each hazardous waste type within each cell? ____ Yes ____ No

5. Are reactive or ignitable wastes placed in the landfill? ____ Yes ____ No

   a. If yes, is it treated, rendered or mixed before or immediately after placement in the landfill so it is no longer reactive or ignitable? ____ Yes ____ No

   b. Describe treatment, etc. or attach a copy of treatment.

6. Are incompatible wastes placed in the same landfill cell? ____ 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, etc.)

Describe how it is possible for incompatible wastes to be placed in the same landfill cell. (Use narrative explanation sheet.)

7. Are bulk or non-containerized liquid wastes or wastes containing free liquids placed in the landfill? ____ Yes ____ No

   a. If yes, does the landfill have:

      (1) A liner which is chemically and physically resistant to the added liquid? ____ Yes ____ No

      (2) A functioning leachate collection and adequate removal system? ____ Yes ____ No

OR

   b. Is the liquid waste treated chemically or physically so that free liquids are no longer present? ____ Yes ____ No

8. 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

   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

9. Are empty containers placed in the landfill? ____ Yes ____ No

   a. If yes, are they reduced in volume (e.g., shredded, crushed)? ____ Yes ____ No

10. Is there evidence of site instability (e.g., erosion, settling)? (Use narrative explanation sheet.) ____ Yes ____ No

11. Is there evidence of ponding of water onsite? (Use narrative explanation sheet.) ____ Yes ____ No

12. 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-12
INCINERATORS CHECKLIST
(Subpart O: 265.340 - 265.369)

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. Does the owner/operator monitor the following when incinerating hazardous waste? Are any of the following instruments existing on the incinerator? Check under applicable column.

   a. Does the owner/operator monitor the following at least every 15 minutes?

		Existing		Monitored	
1.	Waste feed	____ Yes	____ No	____ Yes	____ No
2.	Auxiliary fuel feed	____ Yes	____ No	____ Yes	____ No
3.	Air flow	____ Yes	____ No	____ Yes	____ No
4.	Incinerator temperature	____ Yes	____ No	____ Yes	____ No
5.	Scrubber flow	____ Yes	____ No	____ Yes	____ No
6.	Scrubber pH	____ Yes	____ No	____ Yes	____ No
7.	Relevant level controls	____ Yes	____ No	____ Yes	____ No

(NOTE: EEg., afterburner and temperature, O_2, and CO meters are examples of relevant level controls.)

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

      (1) Color (normal) ____ Yes ____ No

      (2) Opacity ____ Yes ____ No

c. 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 emissons. (Use narrative explanation sheet.) ____ Yes ____ No

(2) Emergency shutdown controls ____ Yes ____ No

(3) System alarms ____ Yes ____ No

d. 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?

EPA Hazardous Waste No.	Description	Weight or Volume Incinerated Daily

Table F-13
THERMAL TREATMENT CHECKLIST
(Subpart P - 265.370-265.399)

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) Concentation 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?

		Existing	Monitored
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 commpliance). ____ Yes ____ No

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 or Detonation to the Property of Others
0-100	204m (670 ft.)
101-1,000	380m (1,250 ft.)
1,000-10,000	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-14

CHECKLIST
Subpart Q
(Chemical, Physical and Biological Treatment, 265.400)

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

1. Describe treatment process (include information on wastes treated).

2. Check 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

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.

APPENDIX G

CERCLA CHECKLIST

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?

   _____

   _____

   _____

   _____

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:

_____

_____

_____

_____

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 AND PCB CHECKLIST

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: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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

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.

_____

_____

_____

_____

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 PCB? 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___

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 [761.42(c)(8)]? Yes___No___N/A___C/A___

b. Do PCB containers comply with DOT specifications except as noted in 3c and 3d below [761.42(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 [761.42(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___

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___

4. Storage Site Operations:

a. Are all PCB items arranged so they can be located by date? [761.42(c)(8)] Yes___No___N/A___C/A___

b. Do observations indicate good housekeeping 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: [761-42(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 nonleaking 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___

(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 [761.42(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 exception? 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___

4. Do solvents to be used for removing PCBs contain less than 50 ppm PCBs [761.42(a)]? 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 [761.43(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 [761.10(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___

2. Do records indicate the quantity of the above items as follows:

   a. The weights of PCBs and PCB items in containers? Yes___No___N/A___C/A___

   b. The 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.

_____

_____

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?

_____

_____

INSPECTION CHECKLIST FOR PCB INCINERATORS

Company Name _____ Location _____

Incinerator Plant _____ Date of Inspection _____

Type of Waste Burned _____

Parameters	Requirement	Actual
Combustion criteria	>3% excess oxygen in stack gas 2-sec. dwell @ 1200° C (±100° C) or 1½ sec. dwell @ 1600° C (±100° C) and 2% excess oxygen in stack gas	O = % Dwell = sec. Temp = ° C
Combustion Efficiency $CE = \frac{CO_2}{CO_2 + CO} \times 100$	at least 99.9%	Time of measurement CO_2 = % CO = ppm CE = %
Rate and quantity of PCBs fed to incinerator	Recorded at regular interval at least every 15 minutes	Feed rate = lb/hr PCB conc = PCB feed rate = lb/hr
Temperatures of the *incineration process*	Continuously measured and *recorded*	Minimum temperature of previous 48 hrs.
Flow of PCBs to incinerator	Stops automatically when temperature drops below that required under *combustion criteria*	Cut-off at following Temp = ° F O_2 = % CO = ppm
Excess O_2 monitor Calibration	Must be calibrated every 24 hrs. when burning PCBs	Calibration: Date Time *Concentration* =
Carbon monoxide Monitor calibration	Must be calibrated every 24 hrs. when burning PCBs	Calibration Date Time Concentration =
Draft of Incinerator	Negative	Where measured: Draft = inches H_2O
Particulate Emissions	State permit or 0.08 gr/dscf @ 12% CO_2	Particulate Emissions lb/hr gr/dscf @ 12% CO_2
Maintenance of Records	761.45 (b) dates and amts. of PCBs rec'd, disposed & stored. (c) dates, amts., combustion criteria. (f) documents & corres. from state and local agencies.	
Opacity of stack Emissions	State permit (Method 9)	%
Water scrubbers for HCl control	99.% (state-of-art)	Results of Last Test: Date removal eff = % HCl emissions lb/hr
Storage, decontamination and marking	761.42 - Storage and disp. 761.43 - Decontamination 761.44 - Marking formats	

APPENDIX I

TSCA CONFIDENTIAL BUSINESS INFORMATION PROCEDURES AND FORMS

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.

Figure I-1

EPA

US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

TOXIC SUBSTANCES CONTROL ACT

NOTICE OF INSPECTION

Form Approved
OMB No. 2070-0007
Approval expires 8-31-85

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:

☐ 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.

☐ In addition, this inspection extends to *(Check appropriate blocks)*:

☐ A. Financial data

☐ B. Sales data

☐ C. Pricing data

☐ D. Personnel data

☐ E. Research 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

US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

TOXIC SUBSTANCES CONTROL ACT

TSCA INSPECTION CONFIDENTIALITY NOTICE

Form Approved
OMB No. 2070-0007
Approval expires 8-31-85

1. INVESTIGATION IDENTIFICATION			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:

Ms. Geraldine Hilden
National Enforcement Investigations Center
Bldg. 53, Box 25227
Denver Federal Center, Denver, CO 80225

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:		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.
I have received and read the notice		
SIGNATURE		NAME
NAME		TITLE
TITLE	DATE SIGNED	ADDRESS

Figure I-3

US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

TOXIC SUBSTANCES CONTROL ACT

DECLARATION OF CONFIDENTIAL BUSINESS INFORMATION

Form Approved
OMB No. 2070-0007
Approval expires 8-31-85

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

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.

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.

INSPECTOR SIGNATURE		CLAIMANT SIGNATURE	
NAME		NAME	
TITLE	DATE SIGNED	TITLE	DATE SIGNED

INSPECTION FILE

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 m and distributed to:

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

Figure I-4

EPA

US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

TOXIC SUBSTANCES CONTROL ACT

RECEIPT FOR SAMPLES AND DOCUMENTS

Form Approved
OMB No. 2070-0007
Approval expires 8-31-86

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 ☐ NOT REQUESTED ☐

INSPECTOR SIGNATURE		RECIPIENT SIGNATURE	
NAME		NAME	
TITLE	DATE SIGNED	TITLE	DATE SIGNED

EPA Form 7740-1 (12-82)

APPENDIX J

PESTICIDE CHECKLIST

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

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? _____
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 K

WATER SUPPLY CHECKLIST

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 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 _____

_____

5. Other Source _____ Spring _____ Surface source

Security (signs, fences, etc.) _____
Minimum available flow _____ gpm ____ Measured ___ Estimate
Sources of contamination _____
Source area ownership _____

Springs

Fencing	____ Yes	____ No	Screened Overflow	____ Yes	____ No
Surface runoff ditch	____ Yes	____ No	Hatch and curbing	____ Yes	____ No
Springbox	____ Yes	____ No	Bottom drain	____ Yes	____ No

Comments: _____

_____

Surface Source

Impoundment	____ Yes	____ No	Spillway	____ Yes	____ No
Diversion dam	____ Yes	____ No	Intake screens	____ Yes	____ No
Infiltration gallery	____ Yes	____ No	Drain	____ Yes	____ No

Source name: _____

Comments: _____

6. Storage

General: Volume ___ gallons Type: ___ Reservoir ___ Hydro-pneumatic

Separate inlet/ outlet	____ Yes	____ No	Drain to daylight	____ Yes	____ No
Hatch	____ Yes	____ No	Flap valve	____ Yes	____ No
Water level indicator	____ Yes	____ No	Booster pump	____ Yes	____ No

Reservoir: Material _____

Overflow	____ Yes	____ No
Screened vent	____ Yes	____ No
Covered	____ Yes	____ No

Hydro-pneumatic tank: Operating range _____-_____

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
Calcium hypochlorite ____ Yes ____ No
Gas Chlorine ____ Yes ____ No

Proportional to flow ____ Yes ____ No
DPD chlorine 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
Commments: _____

_____

9. Monitoring: Type of system (check)

____ Groundwater
____ Surface water
____ Purchase from other water system

Parameter	Required Frequency	Sampling Current? Yes	No	Met MCL's? Yes	No
Coliform bacteria	_____	___	___	___	___
Turbidity	_____	___	___	___	___
Inorganics (nitrate)	_____	___	___	___	___
Radiologic contaminants	_____	___	___	___	___
Organics	_____	___	___	___	___
Other	_____	___	___	___	___

Comments: _____

_____