ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
HAZARDOUS WASTE DIVISION

THE ARKANSAS HAZARDOUS WASTE MANAGEMENT PROGRAM

1. Program Overview.

Arkansas' hazardous waste program, in its broadest statement of purpose, is designed to protect the public health and safety and the environment from the effects of improper, inadequate, or unsound management of hazardous wastes. It accomplishes this to the fullest extent possible by establishing a program of strict regulation over the generation, storage, transportation, treatment, disposal, and other forms of management of these wastes. The program additionally affords the people of the State a voice in the management of hazardous wastes within Arkansas. The lead agency for the hazardous waste management program in Arkansas is the Department of Pollution Control and Ecology (ADPC&E).

It is the intent of the Arkansas Department of Pollution Control and Ecology to maintain and administer a hazardous waste management program that is equivalent in force and effect to the Federal program as established by the Resource Conservation and Recovery Act, as amended, including but not limited to the Hazardous and Solid Waste Amendment. Arkansas has adopted EPA's hazardous waste regulations of May 19, 1980 as amended. Subsequent regulations promulgated in interim and final form for Non-HSWA Cluster III through June 30, 1987 have been adopted by reference by the Commission after public hearing and presented in state program revisions submitted in final form on March 15, 1989. Final authorization for these changes was received effective May 29, 1990 (55 FR 11192, March 27, 1990). Federal regulations promulgated through June 30, 1989, known collectively as Non-HSWA Cluster IV, HSWA Cluster I, and elements of HSWA Cluster II have been adopted through annual revision of the Arkansas Department of Pollution Control and Ecology's Regulation No. 23 (Hazardous Waste Management). A revision authorization application for these changes was submitted on March 15, 1989. Addenda to this application for final authorization for these updates were submitted on September 18, 1989, and January 24, 1991. Final authorization for these program revisions was received effective November 18, 1991 (56 FR 57593, November 13, 1991). Final revision authorization application for the remainder of HSWA Cluster II and Non-HSWA Clusters V and VI were submitted on June 3, 1992. Final authorization for these program revisions was received effective December 6, 1992 (57 FR 45721 and 45722, October 5, 1992). Arkansas currently has final authorization for all components of and revisions to the federal RCRA program promulgated on or before June 30, 1991.

Although the state has not yet been authorized for RCRA Cluster II, Arkansas has adopted Federal regulations promulgated through June 30, 1993 during its annual regulatory reviews and revisions. The current, 1992 revision to Arkansas Department of Pollution Control and Ecology (ADPC&E) Regulation No. 23 (Hazardous Waste Management) addresses all Federal regulations in effect as of June 30, 1992. All components of RCRA Cluster II are now being implemented and enforced as State regulations.

Program revision changes include corrected revision checklists at TAB C and a supplemental Attorney General's Statement at TAB B.

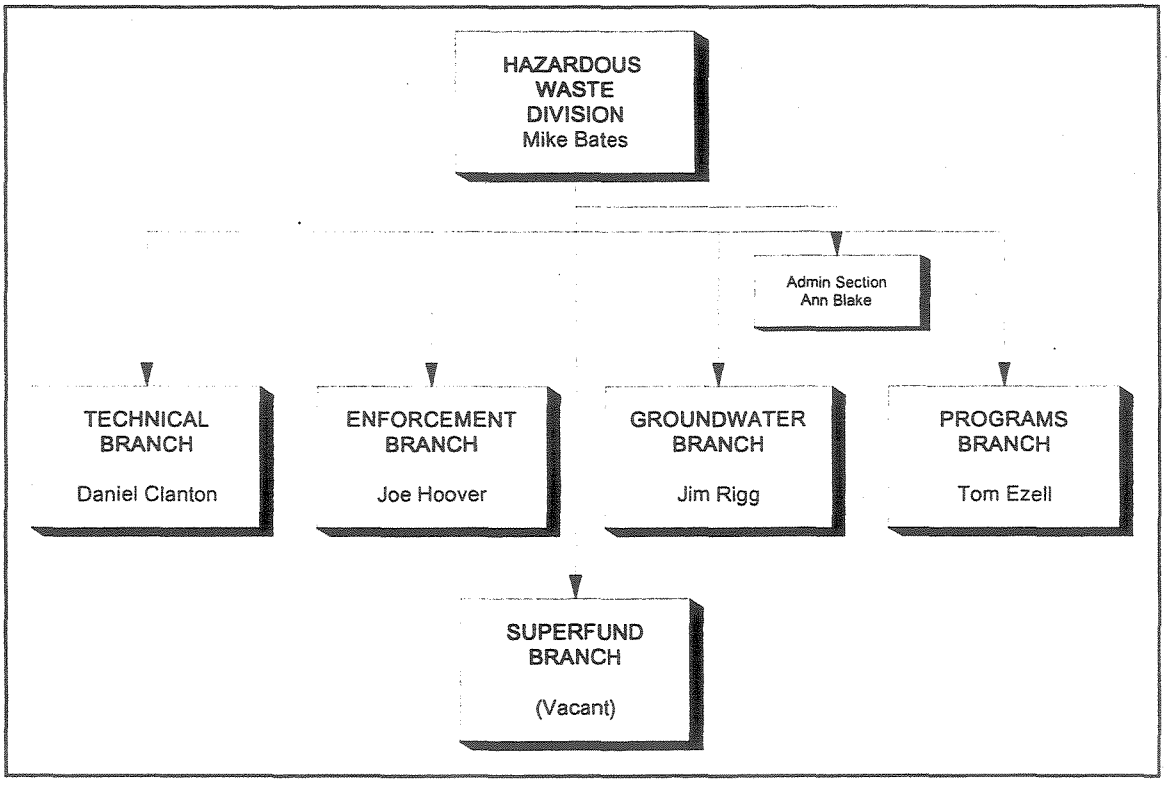
The state agency organization and structure (TAB A, Figure 1) of the program description has been updated to reflect the reorganization of the Arkansas Department of Pollution Control and Ecology with the addition of several positions to the program.

Additional revisions of Regulation No. 23 and the State program are anticipated in order that the State program will remain equivalent and no less stringent than Federal requirements as federal regulations are amended or modified.

Arkansas's Hazardous Waste Management program is administered by the Department's Hazardous Waste Division,

and incorporates not only the state's equivalent of the federal RCRA hazardous waste program, but a hazardous substance site remedial action program similar to the federal Superfund program. Administration of the RCRA portion of the Arkansas Hazardous Waste Management Program involves approximately $3.2 million annually, and 30 man-years of effort.

The Hazardous Waste Division of ADPC&E administers the State's hazardous waste program under authority of the Arkansas Hazardous Waste Management Act, the Resource Recovery Act, the Emergency Response Fund Act, the Remedial Action Trust Fund Act, and Regulation No. 23 (Hazardous Waste Management). The Hazardous Waste Division has primary responsibility within the Department of Pollution Control and Ecology for administering the hazardous waste permitting and enforcement authority delegated by EPA under RCRA. The Division additionally is responsible for the Department's hazardous waste cleanup activities under the Federal "Superfund" act and the corresponding State statutes.



The Division's stated mission is:

MISSION STATEMENT FOR THE HAZARDOUS WASTE DIVISION

To enhance and protect health and the environment by the safe management of hazardous waste and substance through a program of

- *Rulemaking*
- *Permitting*
- *Compliance monitoring and enforcement*
- *Site remediation*
- *Encouraging waste minimization and pollution prevention*

SUPERFUND BRANCH JOB SUMMARIES

TECHNICAL ASSISTANCE MANAGER: The Technical Assistance Manager serves as the Superfund Branch Manager within the Hazardous Waste Division. Job duties include planning, coordinating, and implementating of pre-remedial site investigations, remedial investigations, design and construction of clean-up remedies, as well as supervision of administrative and professional support staff. The Technical Assistance Manager works under the direct supervision of the Hazardous Waste Division Chief.

ENGINEER SUPERVISOR: The Engineer Supervisor supervises Superfund branch remedial activities. Job duties include scheduling and coordinating activity reports, work plans, and review of remedial investigations, feasibility studies, remedial designs, and environmental corrective action studies for National Priorities List (NPL) or State Priorities List (SPL) sites. In addition, the Engineer Supervisor is responsible for reviewing and preparing health and ecological risk studies. The Engineer Supervisor works under the direct supervision of the Technical Assistance Manager.

ENGINEER, P.E./ ENGINEER II: The Engineer, P.E./ Engineer II works in the remedial section of the superfund branch. Job duties include engineering/technical review of environmental remedial action plans, remedial investigation reports, remedy selection reports, and other environmental corrective action studies. The Engineer, P.E./ Engineer II works under the direct supervision of the Engineer Supervisor.

HAZARDOUS WASTE INSPECTOR SUPERVISOR: The Hazardous Waste Inspector Supervisor supervises pre-remedial Superfund branch activities. Job duties include scheduling and coordinating activity reports, work load, research, and production of preliminary assessments and site investigations and reviewing site scores of potential hazardous waste sites for inclusion on the National Priorities List (NPL) or State Priorities List (SPL). In addition, the supervisor is responsible for reviewing and conducting health and ecological risk assessments and toxicological studies. The Hazardous Waste Inspector Supervisor works under the direct supervision of the Technical Assistance Manager.

HAZARDOUS WASTE INSPECTOR: The Hazardous Waste Inspector is responsible for conducting discovery, preliminary assessments and site inspections at potentially uncontrolled hazardous waste sites under the pre-remedial phase of the superfund branch. In addition, the inspector conducts preliminary ranking of sites investigated for possible inclusion on the National Priorities List (NPL) or State Priorities List (SPL). The Hazardous Waste Inspector works under the direct supervision of the Hazardous Waste Inspector Supervisor.

ADMINISTRATIVE ASSISTANT II: The Administrative Assistant II works directly under the supervision of the Technical Assistance Manager. Job duties include coordinating the receipt, review, and return of submittal documents; gathering weekly and monthly activity reports from Engineer Supervisor and Hazardous Waste Inspector Supervisor; developing and implementing administrative policies and procedures for the Technical Assistance Manager; and acting in support of branch personnel.

ENFORCEMENT BRANCH:

The Enforcement Branch is responsible for the conduct of inspections, oversight of corrective actions and enforcement proceedings. It consists of a branch manager, one inspector supervisor, five hazardous waste inspectors, and an Administrative Assistant II (Enforcement Coordinator). A separate team of one engineer and four inspectors provide 24-hour coverage of the ENSCO commercial disposal facility in El Dorado. The branch will add a dedicated enforcement section in FY 94 to improve and speed the processing of enforcement case loads.

for the benefit of all Arkansans.

The Hazardous Waste Division currently consists of 31 employees and administers a budget of $3.2 million. To accomodate the expanded responsibilities of HSWA authority and expanding Superfund responsibilities, the Division plans to expand to 36 employees in FY 94, and to 42 employees by the end of FY 95. Of these, 25 are associated with the RCRA program. The Hazardous Waste Division is divided into five branches: the Enforcement Branch, the Technical Branch, the Programs Branch, the Groundwater Branch, and the Superfund Branch.

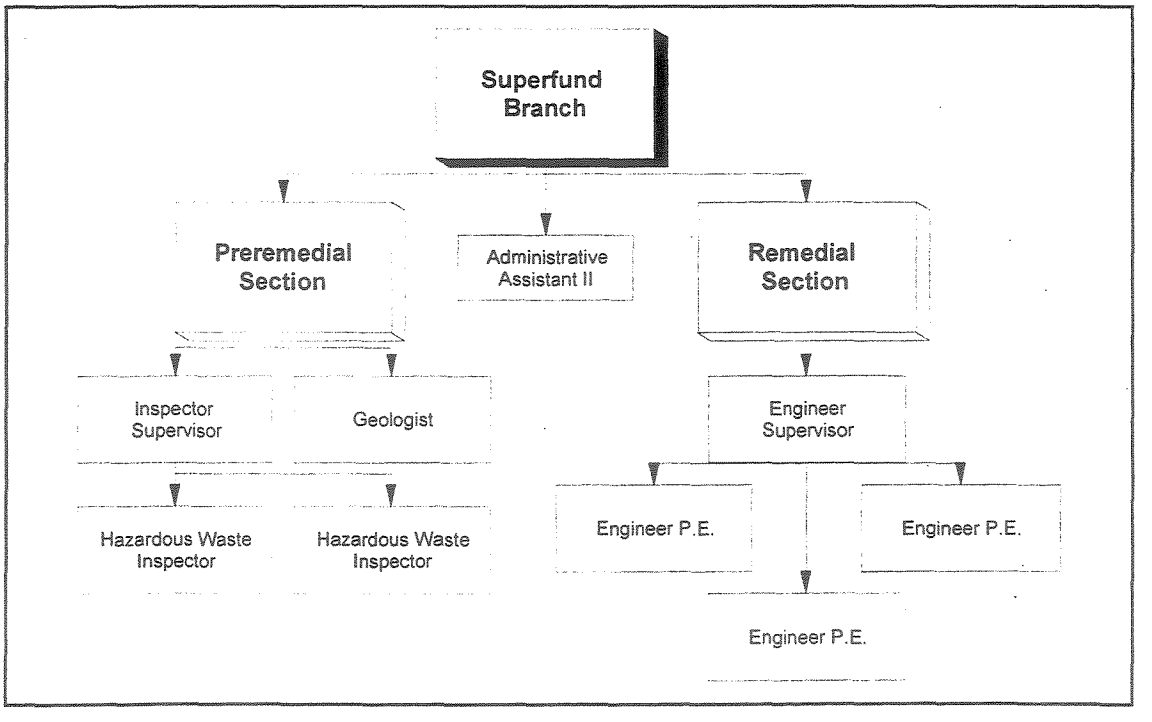
Personnel resources and functional responsibilities provided by the Hazardous Waste Division in support of the RCRA program are described and listed below:

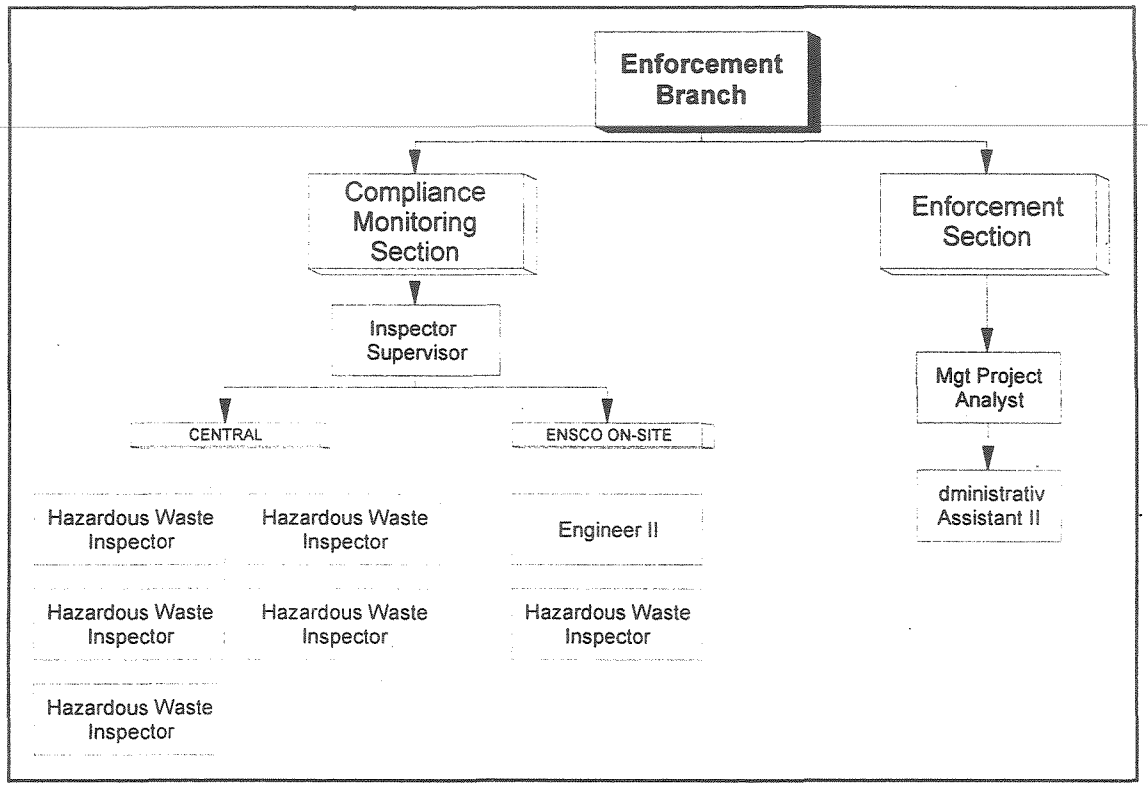
The Chief of the Hazardous Waste Division provides overall management and supervision of the Division, conducts planning and policy development, coordinates activities, supervises employees, interprets policy and legislation and allocates resources to meet these priorities. He is assisted by an Administrative Assistant II, who monitors and coordinates enforcement case loads, prepares initial drafts of enforcement documents, notices of violation, and administrative orders for the Enforcement Branch Manager, and provides general administrative support to the Division Chief. This Administrative Assistant additionally supervises and coordinates the activities of the two Division secretaries.

Organization and Structure of the Hazardous Waste Division

SUPERFUND BRANCH

The Superfund Branch is responsible for all State actions under the Federal and State Superfund programs.





ENFORCEMENT BRANCH JOB SUMMARIES:

PROGRAM SUPPORT MANAGER :
The Program Support Manager serves as the Enforcement Manager of the Hazardous Waste Division. The job duties include coordinating and negotiating with EPA on all grant commitments (MOU, RIP, Grant Workplan, etc.), determining the appropriate types of enforcement action regarding violations/violators, initiating, negotiating, and finalizing all formal enforcement actions for the Hazardous Waste Division. The Enforcement Manager must also coordinate all enforcement actions through the legal division and directors office. The Enforcement Manager reports directly to the chief of the Hazardous Waste Division.

INSPECTOR SUPERVISOR:
The Inspector Supervisor serves as the supervisor for five inspectors and one engineer. The job duties include developing an annual inspection schedule, reviewing all Compliance Evaluation Inspections conducted by the inspectors, concur on all Waste Disposal Request Forms, log and track complaints, and provide technical assistance to the public. The Inspector Supervisor directly reports to the Enforcement Manager.

HAZARDOUS WASTE INSPECTOR (Little Rock):
The Hazardous Waste Inspector is responsible for conducting pre-inspections, on-site compliance evaluation inspections, complaint investigations, and providing technical assistance to the public. The inspector is responsible for documenting, reporting, sampling, and tracking all facilities and complaints assigned to him/her.

ENGINEER II (El Dorado):
The Engineer II provides on-site inspections, monitoring, sampling, and tracking at Ensco. The Engineer II provides

assistance in complaint investigations and emergency response when needed.

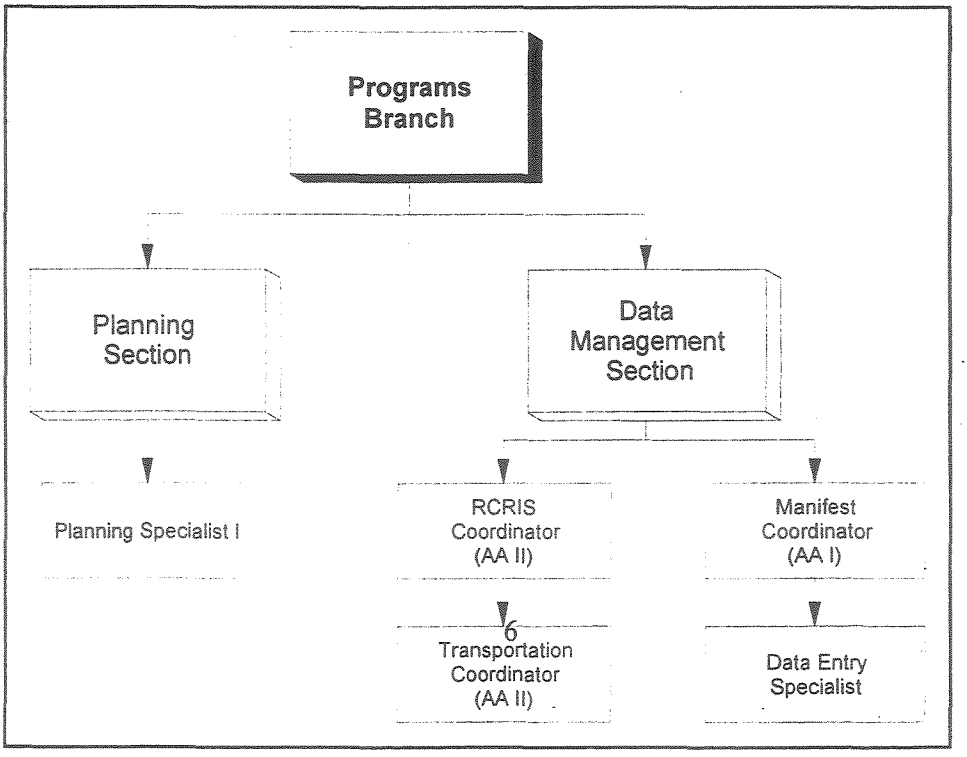
HAZARDOUS WASTE INSPECTOR (El Dorado):
The Hazardous Waste Inspector provides on-site inspections, monitoring, sampling, and tracking at Ensco. The Hazardous Waste Inspector provides assistance in complaint investigations and emergency response when needed.

MANAGEMENT PROJECT ANALYST
The Management Project Analyst serves as the enforcement case worker, drafting and preparing all formal enforcement documents such as notices of violation (NOV) and consent administrative orders (CAO); assisting the Branch Manager and Legal staff in service and settlement negotiations, and tracking the status and disposition of all open and pending enforcement cases.

ADMINISTRATIVE ASSISTANT II
The Administrative Assistant II works under the supervision of the Enforcement Branch Manager and in coordination with the Management Project Analyst. Job duties include coordinating the preparation, review, and distribution of enforcement case documents; gathering weekly and monthly activity reports from Inspector Supervisor and Hazardous Waste Inspector Supervisor; developing and implementing administrative policies and procedures for the Branch Manager; and acting in support of branch personnel.

PROGRAMS BRANCH

The Programs Branch is responsible for developing the State hazardous waste regulations and programs, ensuring its equivalency to the Federal program, developing grant applications and new programs, and for operating educational and outreach programs. The Programs Branch is also responsible for data management for the Division, including input, administration, and upkeep of data from RCRIS, hazardous waste activity notifications, annual and biennial reports, and manifest monitoring and tracking; and administrative and secretarial support for the Division. The Programs Branch consists of a branch manager, a planning specialist, a data management coordinator, an administrative assistant for RCRIS, an administrative assistant for manifests, and a data entry operator. An additional data entry operator will be added by the end of FY 94.



PROGRAMS BRANCH JOB SUMMARIES:

PROGRAM COORDINATING SECTION MANAGER:
This individual serves as Manager of the Programs Branch, and provides program management support and coordination between the Division and branches undertaking technical activities; develops and coordinates state regulations so as to maintain equivalence and compliance with federal requirements; drafts, refines, coordinates, submits, and monitors authorization applications and updates, grant applications and program workplans; tracks grant commitments; drafts and coordinates periodic reports; coordinates capacity assurance planning, and supervises the data management and planning sections.

PLANNING SPECIALIST II:
Responsible for mid- and long-range program planning in support of the state RCRA program; drafts and coordin ates hazardous waste minimization, pollution prevention, and technology transfer; reviews RCRA financial assurance certifications, and assists in budgeting and program logistic planning. Responsible areas: RCRA Financial Assurance; Pollution Prevention/Waste Minimization Program; Hazardous Waste Facility Operation Certification; Information and Training Literature; Long and mid-range planning and program development; Pollution Prevention Clearinghouse

PROGRAM COORDINATOR:
Data management section supervisor. Responsible for preparation, review, and management of the state annual and EPA biennial report; oversight and quality assurance of the state hazardous waste management data bases; and assists in development and coordination of the state Capacity Assurance Plan. Responsible areas: Data Base Quality Control and Oversight; Annual/Biennial Hazardous Waste Reports; Biennial/Annual Report System; Electronic Data Interchange; FOIA Requests for Data Files; RCRIS/Data Management MOU; Facility Invoice Amount Tracking System; Transporters and Manifests as needed

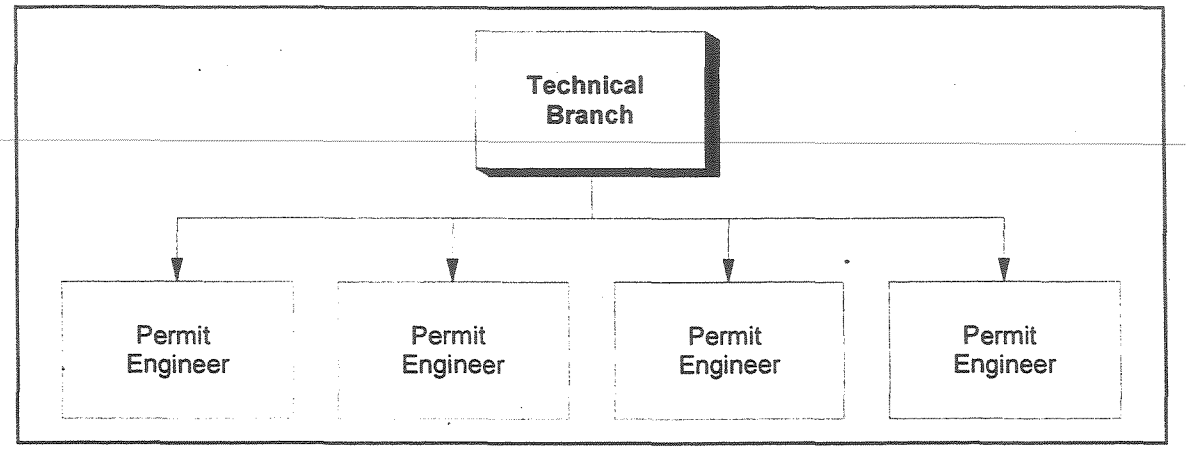
ADMINISTRATIVE ASSISTANT II:
RCRIS Coordinator - Operates, updates, and maintains state RCRIS data base; coordinates hazardous waste generator and facility notifications and updates; and reviews applications for and issues transport permits. Responsible areas: RCRIS and RCRIS Data Base Integrity; Notification of Regulated Waste forms; EPA ID Numbers; FINDS; Superfund Fees Invoices, Hazardous Waste Operators Invoices, Permit Fee Invoices and Monitoring and Inspection Fees; HWOPERS; CCIS Data Base; OSWER Files, EPAIDS Data Base State Tracking Numbers; Provisional EPA ID Numbers; PCB Identification Numbers; and CXG Numbers.

ADMINISTRATIVE ASSISTANT I:
Manifest Coordinator - Reviews all hazardous waste manifests and resolves discrepancies, maintains manifest data base and tracking system, and provides manifest information as requested. Responsible areas: Manifest orders and invoicing; FOIA requests; QA/QC of Manifest and UST Numbers; Hazardous Waste Transporter Permits and Invoicing

DATA ENTRY SPECIALIST:
Performs data entry and filing for manifests and annual hazardous waste reports. Responsible areas: Manifest Data Entry; EPAIDS Data Entry; Manifest Rules

TECHNICAL BRANCH:

The Technical Branch is responsible for technical review of permit applications and enforcement actions, drafting and coordination of permits, and RCRA and RATFA corrective actions. The Technical Branch also provides engineering consultation to the rest of the Division. The Branch consists of a Branch Manager (Engineer Supervisor) and four environmental engineers.



TECHNICAL BRANCH JOB SUMMARIES:

ENGINEER SUPERVISOR:
The Engineer Supervisor serves as the Technical (Permits) Branch Manager of the Hazardous Waste Division. The job duties include coordinating and negotiating with EPA on all grant commitments for permitting and corrective actions, and oversees the work of the Permit Engineers to ensure smooth and timely processing of permit applications and corrective action tasks and provide quality assurance. Recommends permit decisions for the approval of the Division Chief. Coordinates with Enforcement and Groundwater Branches for enforcement of permit conditions, application of RCRA or RATFA corrective actions pursuant to enforcement action, and provides technical assistance to the Superfund Branch in formulation RATFA remedial actions. The Technical Branch Manager reports directly to the chief of the Hazardous Waste Division.

PERMIT ENGINEER:
The Permit Engineer (Engineer II/P.E.) works under the supervision of the manager of the Technical Branch in support of the hazardous waste treatment/storage/disposal facility permitting program and the HSWA corrective action program. The Engineer also serves as a support role in the state and federal superfund program and in the enforcement activities of the Enforcement Branch. Duties include engineering/technical reviews and oversight of hazardous waste management permit applications and environmental corrective action programs by regulated facilities, facilities under enforcement order, and at abandoned sites.

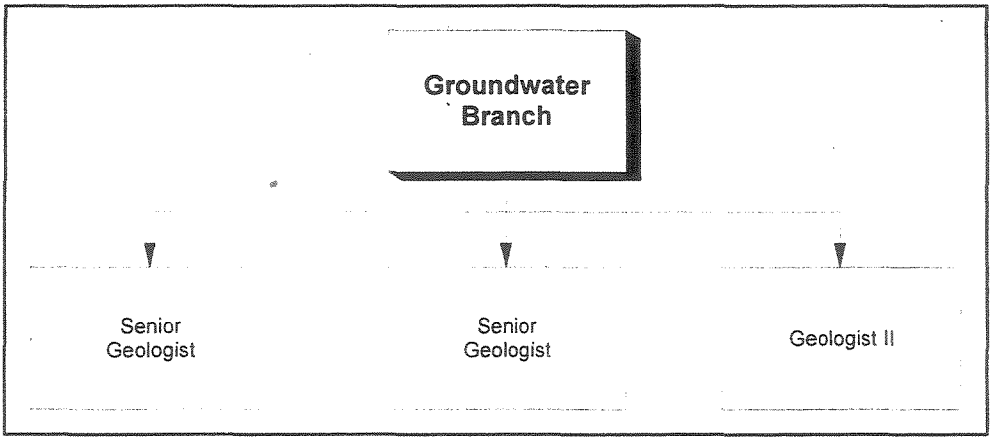
GROUNDWATER BRANCH

The Groundwater Branch of the Hazardous Waste Division is responsible for groundwater monitoring compliance and provides geological and groundwater technical consultation to the Division's RCRA permitting and enforcement and the Superfund branches. It consists of a Geology supervisor, two senior geologists,and two geologists. The Groundwater Branch is responsible for the evaluation of hydrogeologic assessments and groundwater monitoring systems at hazardous waste sites. Comprehensive groundwater monitoring evaluations and operation and maintenance inspections are performed regularly at hazardous waste facilities.

Through the technical branch, the branch reviews permit applications for technical adequacy with respect to groundwater. The groundwater branch, through cooperation with the technical, enforcement and superfund branches, reviews:

- RCRA Facility Investigation workplans and reports
- Corrective Measures Study workplans and reports
- Corrective Measures Implementation workplans and reports
- Superfund Remedial Investigation workplans and reports
- Superfund Feasibility Studies workplans and reports
- Superfund Remedial Action workplans and reports
- Facility Investigations required by Consent Administrative Order

The groundwater branch is part of the spill response team and also assists with inspections, oversight visits and other field/review activities as needed.



THE ARKANSAS HAZARDOUS WASTE MANAGEMENT PROGRAM:

Organization and Management of Arkansas' Program - RCRA 271.6(b) through (h). RCRA Base Program:

The Arkansas General Assembly has approved the necessary legislation to administer a program of scope and coverage equivalent to and no less stringent than that administered by EPA. Two State Acts, the Arkansas Hazardous Waste Management Act (Act 406 of 1979, as amended,(Arkansas Code Annotated (A.C.A) Section 8-7-201 *et. seq.*) and the Arkansas Resource Reclamation Act (Act 1098 of 1979, as amended, A.C.A. Section 8-7-301 *et. seq.*) set the legal framework for the State's hazardous waste management program. The Arkansas Remedial Action Trust Fund Act (Act 479 of 1985, as amended, A.C.A. section 8-7-501 *et. seq.*) provides additional authority for corrective action and remediation of hazardous waste releases at RCRA sites and facilities. In addition to and based upon this framework, ADPC&E publishes and updates *ADPC&E Regulation No. 23 (Hazardous Waste Management)*,[1] which serves as the basic regulation for administration of the program. ADPC&E adopts EPA regulations published in 40 CFR by reference whenever possible, incorporating these in the state regulation.

The following sections of Title 40 Code of Federal Regulations are incorporated by reference into ADPC&E Regulation No. 23 (Hazardous Waste Management):

Title 40 Code of Federal Regulations:

(1) Subparts A, B, C, and Appendix I of Part 260; with the exception of the definition of "Act", "Active Portion", "EPA Identification Number", "Existing Hazardous Waste Management Facility", "Hazardous Waste", "Operator", and "Person" set forth in 260.10 (for analogous provisions see § 2a);

(2) Subparts A, B, C, D, and Appendices I, II, III, VII, VIII, and X of Part 261; with the exception of 261.8;

(3) Subparts A, B, C, D, E, F, and G of Part 262; with the exception of 262.20(e), 262.41 and 262.44 (for analogous provisions see § 16);

(4) Subparts A, B, and C of Part 263;

(5) Subparts A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, W, X, AA, BB, and Appendices I, IV, V and IX of Part 264 with the following exceptions: 264.75, 264.312(b) and 264.314 (a), (b), (d), and (e) (for analogous provisions see §§ 13a(5) and § 16), and 264.571b (for analogous provisions see § 13a(6)) ;

6) Subparts A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, W, AA, BB, and Appendices I, III, IV, and V of Part 265 with the following exceptions: 265.75, 265.312(b) and 265.314 (a), (b), (c), and (e) (for analogous provisions see §§ 13a(5) and 16), 265.443(a)(4) (for analogous provisions, see § 13a(9);

(7) Subparts C, E, F, G, and H and Appendices I, II, III, IV, V, VI, VII, VIII, IX, X, XI, and XII of Part 266;

(8) Subparts A, B, C, D, E, and Appendices I, II, III, IV, V, VI, VII, VIII, and IX of Part 268, with the following exceptions: 268.5, 268.6, 268.42(b), and 268.44 (no analogous provisions);

(9) Subparts A, B, C, D, E, F, and G of Part 270 with the following exceptions: the definitions of "Hazardous Waste", "Existing Hazardous Waste Management Facility", "Site", "Person", "Permit", and "Operator" set forth in 270.2 (for analogous provisions see § 2); 270.10(e) (for analogous provisions see § 12a(1)-(6); 270.12 (for analogous provisions see § 6); 270.51 (no analogous state provisions); 270.70 (for analogous provisions see § 12a(7) and (8)).

(10) The definition of "PCB" and "PCBs", "PCB items", "PCB-contaminated electrical equipment" set forth in 40 CFR 761.3;

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[1] In December 1991, ADPC&E adopted a uniform numbering sequence for all state environmental regulations in order to avoid confusion between the several waste management codes and the Arkansas Code of 1987, Annotated. The Arkansas Hazardous Waste Management Code was renamed ADPC&E Regulation No. 23 (Hazardous Waste Management), beginning with the December 6, 1991 revision.

(11) Subparts A of Part 124 with the following exceptions: 124.1, 124.2, 124.3(b), 124.3(d), 124.3(e), 124.4, 124.5(b), 124.5(e), 124.5(g), 124.6(b), 124.9, 124.10(a)(1)(i), 124.10(a)(1)(iv), 124.10(a)(1)(v), 124.12(e), 124.14, 124.15, 124.16, 124.18, 124.19, and 124.21 (see ADPC&E Regulation No. 8 (Administrative Procedures) for analogous provisions as referenced in § 12 of this Regulation.)

(12) All as adopted as final rules (including "interim final rules" and "technical amendments") published by the U.S. Environmental Protection Agency on or before June 30, 1992.

Under the above listed legislation and regulations, ADPC&E has established a hazardous waste management program that is equivalent and no less stringent than the Federal program as summarized below.

The goals set by the Arkansas Hazardous Waste Management program are:

o to protect the public health and safety, the health of living organisms, and the environment from the effects of improper, inadequate, or unsound management of hazardous wastes;

o to establish a program of regulation over the generation, storage, transportation, treatment, and disposal of hazardous waste;

o to assure the safe and adequate management of hazardous wastes within this state;

o to qualify to adopt, administer, and enforce a hazardous waste program pursuant to the Federal Resource Conservation and Recovery Act, as amended, (P.L. 94-580);

o to afford the people of the State of Arkansas a voice in the permitting of hazardous waste facilities within their respective counties;

o to establish a statewide program designed to protect society and the environment from the risks and burdens associated with the continued practice of disposing of those forms of hazardous waste which could otherwise be treated;

o to encourage the development and utilization of techniques which result in the recovery, reclamation and conservation of resources of the State, including the reclamation and conservation or safeguarding of abandoned hazardous waste disposal sites;

o to encourage interstate cooperation and interstate agreements which would provide a requisite balance of disposal and treatment facilities among the states and which would reduce the amount of hazardous waste disposed of in the state, irrespective of the origin of such wastes; and

o to promote economic growth with environmental concern by establishing a program to assist industries in finding environmentally sound methods of disposing of hazardous waste.

Rulemaking Procedures

RCRA regulations are developed by EPA and published according to an established process. When a regulation is proposed, it is published in a document called the *Federal Register* . It is usually first published as a proposed regulation, allowing the public to comment on it for a period of time, normally 30-60 days. Included with the proposed regulation is a discussion of the Agency's rationale for the regulatory approach and an explanation of the technical basis for the proposed regulation (the preamble). Following the comment period, EPA evaluates public comments. Addressing the comments frequently results in revision to the proposed regulation. The final regulation isthen republished in the *Federal Register* ("promulgated"). Federal regulations are compiled annually and bound

in the *Code of Federal Regulations* (CFR) according to a highly structured format. This latter process is called codification. The codified RCRA regulations can be found in Title 40 of the CFR, Parts 240-280. These regulations are often cited as 40 CFR, with the Part listed afterward, e.g., 40 CFR P, or the Part and Section, e.g., 40 CFR 264.10.

Although it may initiate rulemaking at any time, at least annually, in July, the Department initiates rulemaking procedures to adopt the cluster of federal revisions to existing regulations and any new regulations published in the previous year. For congruence with the federal schedule of state authorization for the RCRA hazardous waste management program, new regulations promulgated in the Federal Register between July of the previous year and June 30 of the current year are adopted as a single group or "cluster". Additionally, any new State regulations or revisions to the State regulations are proposed at the same time.

Proposed new regulations or revisions to regulations are first presented to the Rules and Regulations subcommittee of the Arkansas Pollution and Ecology Commission. Upon the approval by this committee, the proposed rule is submitted for public notice. Public notice includes announcement of the proposed rule in a newspaper of statewide circulation, while full copies of the proposed rule are distributed to sixty repositories and public libraries throughout the state as well as made available for review and copying at the Department headquarters. Following a 30-day public comment period, a public hearing is held on the proposed rule to receive written and oral comments. Written comments are accepted for an additional 10 working days following the public hearing, after which the public comment period is closed.

The Department then gathers and considers all comments received during the public comment period, revises the proposed rule as necessary, and prepares a final rule and responsiveness summary which addresses the consideration and action taken pursuant to all comments received. If the proposed rule is amended such that the scope is changed beyond what was initially contained in the public notice, it is resubmitted for a second public notice and comment period.

The final rule and responsiveness summary is then presented again to the Regulations committee of the Commission and the Rules and Procedures Committee of the Legislative Council. Upon approval by these two bodies, the final rule is presented to the full Pollution Control and Ecology Commission for approval and adoption.

Following the approval of the Commission, a minute order is prepared reflecting the Comission's decision and the rule and minute order are forwarded to the Governor's Office for signature. The signed rule is then filed with the office of the Secretary of State for publication in the *Arkansas Register* . The rule is effective 20 calendar days following its filing with the Secretary of State.

Availability of Information

Any information made available to the Department must be made available to the public to the extent and in the manner authorized by the Arkansas Freedom of Information Act codified at Ark. Code Ann. 25-19-101 to 25-19-107 (Repl. 1979 and Supp. 1985) and by the Freedom of Information Act, 5 U.S.C. Section 552, Section 3007(b) of RCRA and EPA regulations implementing the Freedom of Information Act.

The following Freedom of Information policy was adopted for use by the Department on August 6, 1986:

1) All documents not subject to protection or exclusion under the provisions of the FOIA will be available for public review during normal working hours. All provisions of the FOIA will be adhered to.

Arkansas's Freedom of Information Act is much broader in scope than it's Federal equivalent. Arkansas's FOIA defines a public record as "writings, recorded sounds, films, tapes, or data compilations in any form, required by law to be kept or otherwise kept, and which constitute a record of the performance or lack of performance of official functions which are or should be carried out by a public official or employee, a

governmental agency, or any other agency wholly or partially supported by public funds or expending public funds. All records maintained in public offices or by public employees within the scope of their employment shall be presumed to be public records."

"Except as otherwise specifically provided by this section or by laws specifically enacted to provide otherwise, all public records shall be open to inspection and copying by any citizen of the State of Arkansas during the regular business hours of the custodian of the records."

"... the following records shall not be deemed to be made open to the public by the provisions of this Act:

(1) State income tax returns;
(2) Medical, scholastic, and adoption records;
(3) The site files and records maintained by the Arkansas Historic Preservation Program and the Arkansas Archaeological Survey;
(4) Grand jury minutes;
(5) Unpublished drafts of judicial or quasi-judicial opinions and decisions;
(6) Undisclosed investigations by law enforcement agencies of suspected criminal activity;
(7) Unpublished memoranda, working papers, and correspondence of the Governor, legislators, Supreme Court Justices, and the Attorney General;
(8) Documents which are protected from disclosure by order or rule of court;
(9) Files which would, if disclosed, give advantage to competitors or bidders; and
(10) Personnel records to the extent that such disclosure would constitute a clearly unwarranted invasion of personal privacy...

ADPC&E is not classified as a law enforcement agency, and with the exception of documents submitted and approved as confidential business information, all documents in the Department's offices are subject to disclosure under the Arkansas FOIA. The Department may not withhold information from disclosure which EPA may designate as "enforcement sensitive".

2) Space will be made available for public review of documents.

3) Copying services will be available to the public on a time available basis. Copies will be made of specifically requested documents only. A person assessing file materials must make a specific listing of each document they wish copied and give this list to the person assigned to assist them. Forms will be provided to assist in this compilation. In some instances, actual copying may not be available the same day the material is reviewed, however, copying requests will be processed with daily work loads as quickly as possible.

4) Copying and item charges are as follows: each separate page at 20 cents each, if copying is done by Department staff, plus staff time charges for compilation or copying if in excess of one (1) hour at employees' hourly rate. If Department staff is not immediately available to provide copying, or if the requesting individual so desires, individuals may make their own copies using Department copiers at a cost of 10 cents per page.

5) Any questions concerning public documents must be in written form and given to the assistant. These questions will be responded to in writing or by phone as soon as normal work commitments allow.

6) Files in active use, which would otherwise be available for immediate public review, will be made available for review as quickly as possible but not later than the three day period provided for under the FOIA.

7) Items or requests not covered by this policy will be handled on a case by case basis.

A 1991 amendment (Act 435 of 1991) to the Arkansas Hazardous Waste Management Act allows for the recoupment of attorney's fees and other reasonable expenses from the Department when a plaintiff substantially prevails in a lawsuit against the Department for a violation of the Arkansas Freedom of Information Act.

Specific policies on the availability of information to the public are contained in the State/EPA RCRA Memorandum of Agreement and Section 6 of Regulation No. 23 (Hazardous Waste Management) .

Handling of Confidential Business Information and Trade Secrets

In lieu of the provisions of 40 CFR 270.12, the following provisions apply within Arkansas's authorized hazardous waste management program:

Any records, reports, or information contained under this Regulation and any permits, permit applications, and related documentation shall be available to the public for inspection and copying. However, upon a satisfactory showing to the Director that such records, reports, permits, documentation, or information, or any part thereof would, if made public, divulge methods or processes entitled to protection as trade secrets, the Director shall consider, treat and protect such records as confidential. It shall be the responsibility of the person claiming any information as confidential under the provisions of subsection a above to clearly mark each page containing such information with the words "CONFIDENTIAL" and to submit an affidavit setting forth the reasons that said person believes that such information is entitled to protection.

Any document submitted to the Department which contains information for which the claim of confidential information is made shall be submitted in a sealed envelope marked "CONFIDENTIAL" and addressed to the Director. The document shall be submitted in two separate parts. The first part shall contain all information which is not deemed by the person preparing the report as confidential and shall include appropriate cross references to the second part which contains data, words, phrases, paragraphs, or pages and appropriate affidavits containing or relating to information which is claimed to be confidential.

No information shall be protected as confidential information by the Director unless it is submitted to him in accordance with the provisions of subsection (c) above. No information which is submitted in accordance with the provisions of subsection (c) above shall be afforded protection as confidential information unless the Director finds that such protection is necessary to protect trade secrets and that such protection will not hide from public view the characteristics of waste material and probable effects of the introduction of such waste or byproducts into the environment as a result of the operation of a hazardous waste management facility. The person who submits information claimed as confidential shall receive written notice from the Director as to whether the information has been accepted as confidential or not.

All information which meets the tests of subsection (d) above shall be marked with the term "ACCEPTED" and shall be protected as confidential information. Whenever the Director finds that information which has been submitted as confidential information in accordance with subsection (c) above does not meet the criteria of subsection (d) above, he shall promptly notify the person submitting such information of his findings and shall give that person reasonable opportunity to further justify his contention that the information deserves protection as a trade secret or to further limit the scope of information for which the request for protection is made. If said person fails to satisfactorily demonstrate to the Director that such information in the form presented to him meets the criteria of subsection (d) above, the Director shall mark the information "REJECTED" and promptly return such information to the person submitting such information. Such person shall have 30 days to resubmit the information in acceptable form or appeal the decision of the Director.

All information which is accepted by the Director as confidential shall be stored in locked filing cabinets and only those personnel of the Department specifically designated by the Director shall have access to the information contained therein. The Director shall not designate any persons to have access to confidential information unless the person requires such access in order to carry out his responsibilities and duties. No person shall disclose any confidential information except in accordance with the provisions of this Section. No copies shall be made other than for internal Department use or for use or transmittal to officers and employees of the United States except with the written permission of the Director and the person submitting the information.

The person(s) designated by the Director to maintain confidential files as herein provided shall maintain a log showing the persons who have had access to the confidential files and the dates of such access.

As necessary to carry out the provisions of the Arkansas Hazardous Waste Management Act, any confidential information acquired by the Department under the provisions of said act may be transmitted to other offices, employees, or authorized representatives of the state or United States provided that the owner or operator of the facility to which such information pertains is informed of such transmittal and provided that such transmittal is made under a continuing restriction of confidentiality.

Nothing contained herein shall be construed so as to restrict the release of relevant confidential information during situations declared to be emergencies by the Director or his designee.

Claims of confidentiality for the name and address of any permit applicant or permittee will be denied.

If a request for any records, documents or information acquired or maintained by ADPC&E pursuant to the Arkansas Hazardous Waste Management Act and/or this Regulation is denied by the Director a notice shall be sent to the requestor stating the basis of the denial and informing the requestor that:

1) He may appeal immediately from such denial to an appropriate Circuit Court pursuant to the Arkansas Freedom of Information Act; or,

2) He may request judicial review within thirty (30) days of receipt of the notice by filing a notice of appeal with the Secretary of the Arkansas Commission on Pollution Control and Ecology and proceeding further pursuant to A.C.A. § 8-4-222.

If a request for records, documents or information is denied, the Director will send the notice required by subsection (k) within twenty (20) days of receipt of the request.

If the Director fails to produce requested records, documents or information and fails to send the notice required by subsection (k), such failure shall constitute final agency action giving the requestor the right to judicial review under A.C.A. § 8-4-222 in addition to any rights of review under the Arkansas Freedom of Information Act.

Authority to Share Information with EPA.

§8-7-208 of the Arkansas Code of 1987, Annotated, authorizes the Department to share any information gathered pursuant to the hazardous waste management program with EPA and other state environmental agencies. The RCRA Memorandum of Agreement between the Department and EPA Region VI specifies the procedures for sharing any requested information.

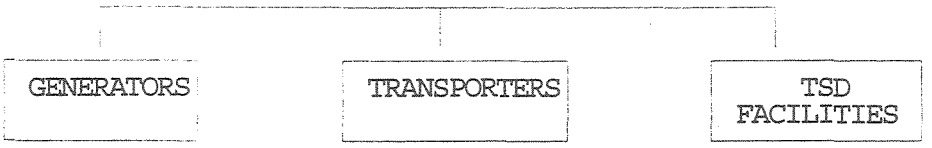
Authority over Indian Lands.

The Arkansas Department of Pollution Control and Ecology has not been authorized for and does not seek RCRA authority over Indian lands within the state.

SCOPE OF ARKANSAS'S HAZARDOUS WASTE MANAGEMENT PROGRAM

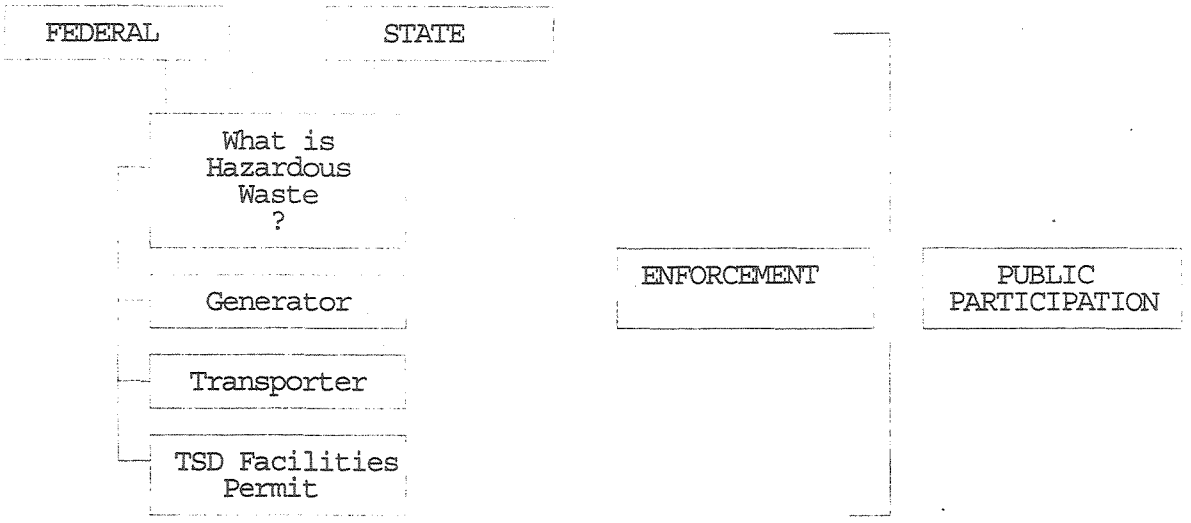
Subtitle C of the federal Resource Conservation and Recovery Act (RCRA) of 1976, as amended, establishes a program to manage hazardous wastes from "cradle-to-grave." The objective of the Subtitle C program is to ensure that hazardous waste is handled in a manner that protects human health and the environment. To this end, there are Subtitle C regulations regarding the generation, transportation, and treatment, storage, or disposal of hazardous wastes. In practical terms, this means regulating a large number of hazardous waste handlers.

The Hazardous Waste Management (HWM) Program regulates:



ADPC&E's HWM program contains perhaps the most comprehensive regulations the State has ever developed. They first identify those solid wastes that are "hazardous" and then establish various administrative requirements for the three categories of hazardous waste handlers: generators, transporters, and owners or operators of treatment, storage, and disposal facilities (TSDFs). In addition, the HWM regulations set technical standards for the design and safe operation of TSDFs. These standards are designed to minimize the release of hazardous waste into the environment. Furthermore, the regulations for TSDFs serve as the basis for developing and issuing the permits required for each facility. Issuing permits is essential to making the Subtitle C regulatory program work, since it is through the permitting process that the State or EPA actually applies the technical standards to facilities.

MANAGING HAZARDOUS WASTE



The improper management of hazardous waste is probably one of the most serious environmental problems in the United States. In 1979, EPA estimated that only 10 percent of all hazardous waste was managed in an enviromentally sound manner. The remainder was transported, treated, stored, or dosposed of in a way that potentially threatens human health and the enviroment. Since that time, the amount of hazardous waste produced has steadily risen.

Mismanagement has potentially severe consequences: groundwater - the source of drinking water for about half the nation's population - is polluted from the open dumping of wastes or from improperly operated landfills and surface impoundments. In some areas, residents obtain drinking water from other sources because groundwater supplies are so badly contaminated with toxic or cancer-causing chemicals and heavy metals.

Ground-water pollution is not the only problem posed by improper hazardous waste management. The improper disposal of hazardous waste has polluted streams, rivers, lakes, and other surface waters, killing aquatic life,

destroying wildlife, and stripping areas of vegetation. In other cases, the vaporization of volatile organic materials from wastes that were improperly disposed of has been linked to respiratory illnesses, skin diseases (including skin cancer) and elevated levels of toxic materials in the blood and tissues of humans and domestic livestock. In still other cases, the mismanagement of hazardous waste has resulted in fires, explosions, or the generation of toxic gases that have killed or seriously injured workers and firemen.

The hazardous waste management program developed under RCRA (Sections 3001-3019 of the Act) and the Arkansas Hazardous Waste Management Act is designed to ensure that the mismanagement of hazardous waste does not continue. It does this by creating a "cradle-to-grave" system to manage hazardous waste (including provisions for cleaning up releases) and to set forth statutory and regulatory requirements for:

- Identifying hazardous waste
- Generators of hazardous waste
- Transporters of hazardous waste
- Owners and operators of facilities that treat, store, or dispose of hazardous wastes
- Issuing operating permits to owners or operators of treatment, storage, and disposal facilities, and providing for corrective action for hazardous waste releases
- Enforcing the HWM program
- Transferring the responsibilities of the HWM program from the Federal government to the States.

The statutory, regulatory, and program requirements entailed above are discussed and elaborated upon in following sections.

MORE STRINGENT STATE PROVISIONS

Arkansas has enacted several requirements under its hazardous waste management program which are either in addition to, more stringent than, or broader in scope than the minimum standards of the Federal RCRA program set forth in 40 CFR Parts 260-279.

In summary, Arkansas's more stringent hazardous waste laws and/or regulations compared to the federal programs are listed below. Also included in this listing are the areas considered to be "broader in scope" than their Federal counterparts. Details of the more stringent State provisions are discussed further in this Program Description.

Siting criteria for new treatment, storage and disposal facilities (TSDFs).

Requirements for Certified Hazardous Waste Operators at commercial TSDFs, Additional personnel training requirements for commercial facilities.

Permit and Monitoring and Inspection Fee system.

Additional Performance Standards for TSDFs.

Additional Requirements for Generators

Handling and Disposal Requirements for Conditionally Exempt Small Quantity Generators

New commercial TSDF's may be required to conduct baseline health survey prior to commencing operation.

Additional TSDF ownership disclosure requirements.

Annual Hazardous Waste Reports in lieu of the Federal Biennial Report

Permits required for transporter hauling hazardous waste in or through the State; notification required for transfer facilities.

Required use of Arkansas or destination state manifest; use of Uniform Manifest not allowed.

Mandatory public hearing prior to permit decision for a commercial TSDF; public notice required upon receipt of any permit application and prior to any permit decision.

Polychlorinated biphenyls (PCB's) included in State definition of hazardous waste.

Annual health monitoring required for commercial facility personnel and requirement to offer such physicals to employee spouses.

Corrective action under the State hazardous waste program extends to all hazardous substances

Arkansas's "Superfund" and corrective action statute (RATFA) does not contain an exclusion for petroleum as does the federal law.

Alternative civil penalty authority in enforcement action of hazardous waste (and other media) law and regulations to recover pecuniary gain derived from the unlawful/noncompliant acts.

More stringent requirements for new and existing drip pads than those outlined in 40 CFR Parts 264 and 265, Subparts W.

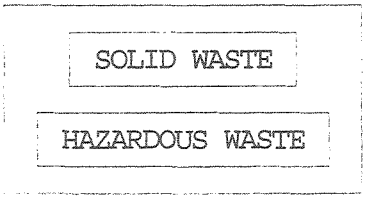
Ban on open burning/open detonation when a better technology is feasible.

Ban on open burning/detonation on unprotected ground surfaces.

More stringent requirements for impermeable coatings for secondary containment areas.

DEFINITION OF HAZARDOUS WASTE

Congress defined the term "hazardous waste" in Section 1004(5) of RCRA as a "solid waste", or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may:



1. Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or

incapacitating reversible, illness or

2. Pose a substantial present or potential hazard to human health or the enviroment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Arkansas controls a universe of hazardous waste equivalent to that covered by 40 CFR Part 261, as amended, including the hazardous components of radioactive mixed waste. The State also regulates polychlorinated biphenyls (PCBs) which are transported to treatment or disposal facilities or commercial storage facilities as hazardous wastes.

Arkansas statutes define ***hazardous waste*** as: "any waste or combination of wastes of a solid, liquid, contained gaseous, or semisolid form which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may in the judgment of the department: 1) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or 2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise improperly managed. Such wastes include, but are not limited to, those which are radioactive, toxic, corrosive, flammable, irritants, or strong sensitizers or those which generate pressure through decomposition, heat, or other means." (A.C.A. § 8-7-203(6)). This definition is narrowed in Regulation No. 23 as "a hazardous waste as defined in 40 CFR 261.3; in addition to these wastes, polychlorinated biphenyls (PCBs), as defined in 40 CFR 761 (including PCBs, 'PCB items', 'PCB transformers', and 'PCB-contaminated electrical equipment') which are transported to treatment or disposal facilities or to commercial storage facilities, shall be regulated as hazardous waste under the provisions of §16 of Regulation No. 23 (Hazardous Waste Management)" (§2a(5)).

Specific definitions and listings of hazardous wastes included in 40 CFR Part 261 are incorporated by reference in Regulation No. 23 (Hazardous Waste Management), and updated annually as Regulation No. 23 is revised.

The State's statutory definition of a hazardous waste does not require that a hazardous waste first be proved to be a "solid waste" as defined in 40 CFR 261.2. Arkansas thus controls a hazardous waste universe which is broader in scope than that controlled under the federal RCRA.

Although Congress defined the term "hazardous waste" in the Act, EPA developed and promulgated a regulatory framework that would identify those solid wastes that must be managed as hazardous wastes under Subtitle C. This framework (40 CFR Part 261), specifies that a solid waste is hazardous if it in not excluded from regulation as a hazardous waste and it meets any of the following conditions:

1. Exhibits any of the characteristics of a hazardous waste

2. Has been named as a hazardous waste and listed as such in the regulations

3. Is a mixture containing a listed hazardous waste and a non-hazardous solid waste

4. Is a waste derived from the treatment, storage, or disposal of a listed hazardous waste.

CHARACTERISTICS

EPA has identified four characteristics for hazardous waste. Any solid waste that exhibits one or more of these characteristics is classified as hazardous under RCRA:

- Ignitability
- Corrosivity
- Reactivity or
- Toxicity Characteristic (TC)

40 CFR 261.20 through 261.24, incorporated by reference at Reg 23 § 3a(2), defines the properties of wastes exhibiting any or all of the existing characteristics described below:

Ignitability 261.21

A solid waste that exhibits any of the following properties is considered a hazardous waste due to its ignitability:

- A liquid, except aqueous solutions containing less than 24 percent alcohol, that has a flashpoint less than 60 C (140 F)
- A nonliquid capable, under normal conditions, of spontaneous and sustained combustion.
- An ignitable compressed gas per Department of Transportation (DOT) regulations or
- An oxidizer per DOT regulation.

Corrosivity 261.22

A solid waste that exhibits any of the following properties is considered a hazardous waste due to its corrosivity:

- An aqueous material with pH less than or equal to 2 or greater than or equal to 12.5 or
- A liquid that corrodes steel at a rate greater than 1/4 inch per year at a temperature of 55 C (130°F).

Reactivity 261.23

A solid waste that exhibits any of the following properties is considered a hazardous waste due to its reactivity:

- Normally unstable and reacts violently without detonating
- Reacts violently with water
- Forms an explosive mixture with water
- Generates toxic gases, vapors, or fumes when mixed with water
- Contains cyanide or sulfide and generates toxic gases, vapors, or fumes at a pH of between 2 and 12.5
- Capable of detonation if heated under confinement or subjected to strong initiating source
- Capable of detonation at standard temperature and pressure or
- Listed by DOT as class A or B explosive

Toxicity Characteristic 261.24

A solid waste exhibits the characteristic of toxicity if, using the test methods described in 40 CFR 261, Appendix II or an approved equivalent method, the extract from a representative sample of the waste contains any of the contaminants listed below at the concentration equal to or greater than the respective value listed:

EPA HW No. [1]	Contaminant	CAS No. [2]	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	[4] 200.0
D024	m-Cresol	108-39-4	[4] 200.0
D025	p-Cresol	106-44-5	[4] 200.0
D026	Cresol	.....	[4] 200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	[3] 0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	[3] 0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentrachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	[3] 5.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

TESTING FOR HAZARDOUS WASTE CHARACTERISTICS

The responsibility for determining if a particular solid waste is hazardous falls on the generators. If a solid waste is neither excluded nor listed, as discussed in the following pages, generators must either test their waste using standard methods (specified in 40 CFR Part 261) or have sufficient knowledge about their waste to assess whether it exhibits any of the characteristics. If the waste does exhibit a characteristic, then it is hazardous and must be handled accordingly. Tests must be applied to each individual waste and cannot be used to assess a type of waste (other than to define the waste generically as hazardous). This provision was established to prevent a national company from making one waste determination and using the results nationwide, masking potential regional variations. The tests must also be run on representative samples to obtain results that adequately characterize the nature of the waste.

LISTING OF HAZARDOUS WASTES

A solid waste is hazardous if it is named on one of three lists in 40 CFR Part 261:

There are Three Lists of Hazardous Wastes:

- Non-specific source wastes
- Specific source wastes
- Commercial chemical products

1. Nonspecific source wastes (40 CFR 261.31) - These are generic wastes, commonly produced by manufacturing and industrial processes. Examples from this list include spent halogenated solvents used in degreasing and wastewater treatment sludge from electroplating processes as well as dioxin wastes, most of which are "acutely hazardous" wastes due to the danger they present to human health and the enviroment.

2. Specific source wastes (40 CFR 261.32) - This list consists of wastes from specifically identified industries such as wood preserving, petroleum refining, and organic chemical manufacturing. These wastes typically include sludges, still bottoms, wastewaters, spent catalysts, and residues, e.g., wastewater treatment sludge from pigment production.

3. Commercial chemical products (40 CFR 261.33(e) and (f), also called "P" and "U" list wastes) - The third list consists of specific commercial chemical products, or manufacturing chemical intermediates. This list includes chemicals such as chloroform and creosote, acids such as sulfuric acid and hydrochloric acid, and pesticides such as DDT and kepone.

HAZARDOUS WASTE MIXTURES

Any waste mixture containing a listed hazardous waste is considered a hazardous waste and must be managed accordingly. This applies regardless of what percentage of the waste mixture is composed of listed hazardous wastes. Wxceptions to the mixture rule outlined above follow:

- If a wastewater discharge subject to regulation by the Clean Water Act is mixed with low concentrations of a listed waste, as specified in 40 CFR 261.3, the resultant mixture is not considered a listed hazardous waste. Of course, if such a mixture exhibited one of the characteristics, it would be deemed hazardous.

- Mixtures of nonhazardous wastes and listed wastes that were listed for exhibiting a characteristic are not considered hazardous if the mixture no longer exhibits any of the characteristics set forth in Subpart C of 40 CFR Part 261.

- Mixtures of nonhazardous wastes and characteristic hazardous wastes are not considered hazardous if the mixture no longer exhibits any of the characteristics set forth in Subpart C of 40 CFR Part 261.

- Certain concentrations of spent solvents and laboratory wastewater that are discharged in low concentrations and do not pose a threat to human health or the enviroment are expected.

- De minimis losses of discarded commercial chemical products or intermediaries used as raw materials in manufacturing or produced as by-products are excepted. These include minor losses from spills and transfer of materials, process leaks, and similar incidental discharges.

An additional exemption from the mixture rule has been granted to the petroleum refining industry for heat exchanger bundle cleaning sludge.

WASTES SPECIFICALLY EXCLUDED FROM REGULATION AS HAZARDOUS WASTES

A generator of solid waste should first determine if the waste is specifically excluded from Subtitle C regulation. If the waste is not excluded, the generator must determine if the waste is hazardous.

Excluded wastes include a number of common solid wastes that do not present a significant threat to human health or the enviroment or are currently managed under other programs in a way that minimizes any threat to human health or the enviroment, (e.g., household wastes, municipal resource recovery wastes, agricultural wastes, and mining overburden returned to the mine site).

Congress exempted certain solid wastes from consideration as hazardous waste. These wastes are detailed in 40 CFR 261.4(b).

Additional solid waste streams that are excluded from consideration as hazardous wastes include: household waste, solid waste returned to the soil as fertilizers, various chromium-containing wastes, and discarded arsenical-treated wood. Hazardous wastes generated in raw material or manufacturing process units are excluded until the wastes leave those units or until the waste remains in an inactive unit longer than 90 days. Wastes sent to laboratories or treatment facilities for treatability studies also are excluded if the stringent provisions of 40 CFR 261.4(d) arefollowed.

Certain residues of hazardous waste in empty containers also are excluded from regulation under Subtitle C. Specifically, any hazardous waste remaining in a liner or empty container is exemptif all of the waste has been removed by methods such as pumping or pouring. Aditionally, no more than 2.5 centimeters of waste can remain in the bottom of the container, or less than 3 percent by weight if the container is under 110 gallons, less than 0.3 percent if over 110 gallons. Special requirements apply if the waste is acutely hazardous. The liner or container must be triple rinsed or cleaned by an equally effective method. The rinsate then must be handled as a hazardous waste.

Consistent with RCRA's mandate to foster resource recovery, the State regulations exempt some secondary materials from RCRA when they are recycled using certain procedures. The exemption is based upon the type of secondary material being recycled and the recycling process used. 40 CFR 261.2 identifies classes of secondary materials including:

- Spent Materials - Materials that have been used and can no longer serve their original purpose without reprocessing
- Sludges - Residues from treatment of air emissions or wastewater pollution control operations
- By-Products - Residual materials from industrial, commercial, mining, and agricultural operations
- Commercial Chemical Products - Chemical products and intermediates, and
- Scrap Metal - Bits and pieces of metal from metal processing operations or consumer use.

When recycled, using one of the following processes, some secondary materials are exempted from RCRA regulation.

- Reclamation - Reprocesssing to recover a usable product and,

- Speculative Accumulation - Accumulation without evidence of recycling or recyclability.

Similarly, the State program includes the federal exemption (40 CFR 261.6) or reduces the regulatory requirements (40 CFR Part 266) for certain hazardous waste recyclable materials or recycling procedures.

WASTES DERIVED FROM HAZARDOUS WASTE

Any residue derived from a listed hazardous waste is considered a hazardous waste. EPA originally established this rule because it is reasonable to assume that wastes derived from hazardous wastes are themselves hazardous unless it can be shown that they do not pose a threat to human health and the environment. The Department adopted EPA's "derived from" and "mixture" rules, pursuant to a separate state rulemaking and public comment period, in the first edition of the Arkansas Hazardous Waste Management Code (now Regulation No. 23), and hence the state rule stands on its own and is not subject to the recent suspension of the federal rule under the *Shell Oil* decision.

The Arkansas HWM program includes the federal provision that certain wastes should not be regulated as hazardous waste, thereby being "excluded" from Subtitle C regulation. Specifically, these are:

- Materials which are not solid wastes (though the State definition does not require that a hazardous waste first be defined as a solid waste)
- Solid wastes which are not to be considered hazardous waste
- Hazardous waste specifically exempted from regulation
- Waste requiring further study before being regulated as hazardous.

DELISTING - WHEN DOES A HAZARDOUS WASTE CEASE BEING HAZARDOUS?

EPA recognizes that its procedures for listing hazardous wastes might not be applicable in all cases. To provide for these cases, EPA created a process called delisting that allows any person, e.g., waste handler or general public, to petition EPA to exclude a listed waste from regulation under Subtitle C. For petitioners to get wastes delisted they must prove to EPA that the wastes are not hazardous because of facility-specific variations in raw materials, processes, or other factors. In evaluating a delisting petition, EPA must consider factors including constituents other than those for which the waste was listed, if EPA has a reasonable basis to believe that such additional factors could cause the waste to be a hazardous waste. If, upon evaluation, EPA determines that the waste is not hazardous due to conditions at the facility, that waste is removed from Subtitle C's regulatory jurisdiction. Delisting is done on a case-by-case basis. Therefore, if a waste is delisted at one facility, it is not automatically delisted at other facilities.

Facilities that treat listed wastes often want to show that the listed waste is no longer hazardous. For example, treating some hazardous waste by incineration may be cost effective only if the resulting ash is not considered a hazardous waste. If this demonstration has been successfully made, the wastes may be disposed outside the purview of Subtitle C. The concept of delisting is central to this demonstration. The owner or operator must conduct studies to show that, once treated, the listed hazardous waste is no longer hazardous.

Characteristic wastes automatically cease being considered hazardous wastes when they cease to exhibit any characteristic. It is also worth noting that the "mixture" and "derived-from" rules do not apply to characteristic wastes. (Of course, if mixtures or residues themselves exhibit a characteristic, they are considered hazardous wastes.)

Arkansas has no separate, State provision or mechanism for the delisting of listed hazardous wastes. Wastes delisted by EPA may be delisted under Arkansas hazardous waste regulations following rulemaking procedures, public hearing, and adoption or incorporation by reference of the specific Federal rule change in Regulation No. 23 (Hazardous Waste Management) . Both the final delisting decision by EPA and the Department's separate

recognition and incorporation of the federal delisting in the state hazardous waste regulations must be accomplished before the delisting may actually be placed into effect.

MIXED WASTE REGULATION

One of the more difficult issues facing EPA and States is the regulation of mixtures of radioactive and hazardous wastes (Mixed Waste). Since Mixed Waste is considered hazardous under RCRA and radioactive under the Atomic Energy Act, both the Nuclear Regulatory Commission (NRC) and EPA work together to address the management of these wastes at the federal level.

Mixed Waste is most often produced by laboratories and by nuclear energy production (source, special nuclear or by-product material wastes). Laboratories may produce scintillation solvents containing organic reagents and low-level radioactive wastes. In nuclear energy production, discarded lead shielding and cooling materials may contain heavy metals and radioactive wastes.

As the Arkansas Department of Health is the state agency with jurisdiction over licensing or registration of by-products, source, special nuclear materials, or devices and equipment using such materials under the Arkansas Radiation Control Act (codified at A.C.A. §§ 20-21-201, *et seq.*), the Arkansas Department of Pollution Control and Ecology has established a Memorandum of Agreement with the Arkansas Department of Health wherein the ADH regulates the radioactive component of mixed wastes, while ADPC&E regulates the hazardous component of the waste.

Generators of Mixed Waste must comply not only with the minimum technical requirements of RCRA, but also with the NRC regulations as well. Thus, since the hazardous and radioactive waste components cannot be readily separated, the design of facilities, drafting of operating requirements for RCRA permits or NRC Licenses, and the development of cleanup solutions must be done in a manner that adequately addresses the hazards posed by both the radioactive and hazardous components of the waste.

REGULATIONS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE

Generators are subject to the standards, including record-keeping requirements, set forth in 40 CFR 262. Additional requirements and other requirements equivalent to Subpart B of 40 CFR Part 262 are imposed by Section 16 of Regulation No. 23 (Hazardous Waste Management) .

The Department has established a comprehensive manifest system which, to the greatest extent possible, allows for a "cradle to grave" tracking of hazardous wastes generated in or disposed of in the State. This system provides for and allows the intrastate, interstate and international transport of hazardous wastes. The state requires the use of its own version of the uniform hazardous waste manifest, and does not permit the use of the uniform hazardous waste manifest by Arkansas shippers or for hazardous wastes imported into Arkansas. Arkansas additionally requires all persons transporting hazardous wastes into or out fo the state, regardless of quantity, to notify the Department of Pollution Control and Ecology , either by having an EPA identification Number or for conditionally exempt and PCB Waste generators, by obtaining a State tracking or PCB identification number and using the Arkansas Hazardous Waste manifest or a neighboring state equivalent. Arkansas does not permit the use of the Uniform Manifest.

Since small quantity generators comprise a significant percentage of the State's hazardous waste universe, Arkansas does not exempt small quantity generators from requirements to notify the Department and EPA of hazardous waste activity or to manifest and ship any and all hazardous wastes only to permitted treatment, storage, or disposal facilities. In the case of conditionally exempt or PCB generators, the Department issues a unique State "CXG" or

"PCB" identification number to facilitate manifesting and shipping of hazardous wastes. The State also requires small quantity and PCB generators to submit an annual hazardous waste activity report equivalent to the requirements of 40 CFR 262.41. Beginning in 1993, Arkansas conditionally exempt generators will be phased from the use of state CXG identification numbers to being issued standard EPA identification numbers.

Under the Arkansas hazardous waste management program, there are three categories of hazardous waste generators:

- Large quantity generators
- Small quantity generators
- Conditionally exempt small quantity generators.

Large Quantity Generators

Large quantity generators are defined as those facilities that generate:

- Over 1,000 kilograms per month of hazardous waste, or
- Over 1 kilogram of acutely hazardous waste per month.

Large quantity generators are subject to the full scope of regulation under 40 CFR Part 262 and Regulation No. 23.

Small Quantity Generators

The initial EPA regulations, published on May 19, 1980, exempted "small quantity generators" (SQGs) from most of the hazardous waste requirements. A small quantity generator was defined as a generator who produced:

Less than 1,000 kG/Mo Hazardous Waste	1984 Amendments →	Less than 100 Kg/Mo Hazardous Waste
		or
1 Kg/Mo Acutely Hazardous Waste		1 Kg/Mo Acutely Hazardous Waste

CHANGES IN SMALL QUANTITY GENERATOR EXEMPTION

- Less than 1,000 Kilograms of hazardous waste at a site per month (or accumulated less than 1,000 Kilograms at any one time)
- Less than 1 Kilogram of acutely hazardous waste per month (or accumulated less than 1 kilogram at any one time).

Because of concern that hazardous waste exempted from regulation due to the SQG exclusion could be causing environmental harm, Congress amended the definition of SQGs in HSWA, reducing the cut-off point from 1,000 kilograms to 100 Kilograms. Thus the revised definition of SQG in Arkansas is a generator who produces:

• Greater than 100 but less than 1,000 Kilograms of hazardous waste at a site per month (and accumulates less than 6,000 Kilograms at any one time)

• Less than 1 kilogram of acutely hazardous waste per month (and accumulates less than 1 kilogram at any one time).

Because SQGs produce such a small portion of the nation's hazardous waste, full regulation might be economically burdensome and inappropriate. Thus, Congress gave EPA authority to vary the regulatory requirements applicable to SQGs from those applied to large generators, provided that the requirements were still protective of human health and the environment.

SQGs who store more than 6,000 kilograms of their waste on-site must meet all large quantity generator requirements. Generators of more than 1,000 Kilograms of hazardous waste per month or 1 Kilogram of acutely hazardous waste per month must, as was the case before the amendments, meet the large quantity generator requirements.

Conditionally Exempt Small Quantity Generators

Currently, a facility that generates less than 100 Kilograms per month of hazardous waste and less than 1 kg per month of acutely hazardous waste is "conditionally exempt" from full regulation under Subtitle C. The conditionally exempt SQG, however, must still:

° Identify the waste to determine whether it is a hazardous waste

° Not accumulate more than 1,000 kilograms of hazardous waste at any time

° Treat or dispose of the waste on site, or ensure that the waste is sent to a:

- Permitted or interim status TSDF, or

- Permitted municipal or industrial solid waste facility, or

- Recycling facility.

Conditionally exempt SQGs who exceed the 100 kg per month hazardous waste cut-off are regulated as a SQG. Conditionally exempt SQGs that generate in excess of 1 kg per month of acutely hazardous waste are regulated as large quantity generators.

Under Arkansas's more stringent provisions, generators of conditionally exempt small quantities of hazardous waste must comply with the requirements found at 40 CFR 261.5 and the additional requirements set forth at Sections 9 and 16 (b) and (c) of Regulation No. 23 (Hazardous Waste Management) .

ADPC&E requires that small quantity and conditionally exempt generators of hazardous waste (less than 100 kg/month) treat, store, or dispose of their hazardous wastes in one of four ways:

1) In a solid waste disposal facility in the State of Arkansas which has been permitted by the Department to dispose of such waste.

2) In a hazardous waste management facility in the State of Arkansas which is permitted to store, treat, or dispose of such waste.

3) Shipped to an approved facility outside of the State of Arkansas, or

4) Treated or disposed of in an on-site solid waste facility which is permitted in accordance with Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended) or the Arkansas Solid Waste Management Act (Act 237 of 1971, as amended).

A hazardous waste treatment, storage, and disposal facility will be considered to have such permission if it is operating under the provision of Interim Status to accept such categories of wastes, or has been issued a permit to accept such wastes. Solid waste disposal facilities may accept such small quantity waste only in accordance with their permit and the provisions of the Arkansas Solid Waste Management Code.

REGULATORY REQUIREMENTS

Large and small quantity generators are subject to regulations contained in 40 CFR Part 262 and Regulation 23, Section 16. Such regulations require:

- Obtaining an EPA ID number
- Preparing the waste for transportation
- Following accumulation and storage requirements
- Manifesting of hazardous waste
- Recordkeeping and reporting.

Each requirement is discussed below with different requirements for large and small quantity generators noted where appropriate.

EPA ID Number

One way that the Department monitors and tracks generators is to assign each generator a unique identification number. Without this number the generator is barred from treating, storing, disposing of, transporting, or offering for transportation any hazardous waste. Furthermore, the generator is forbidden from offering his or her hazardous waste to any transporter, or treatment, storage, or disposal facility that does not also have an EPA ID number.

The Department has assumed the role of receiving notifications of hazardous waste activity and assigning EPA identification numbers from EPA Region VI using the federal FINDS system. Handlers of hazardous waste submit a state Notification of Regulated Waste Activity to the Department and receive the EPA ID number directly from the Department. The notification is enterered into the FINDS system, and the original copy filed by the Department with a copy of the notification provided to EPA.

Pre-Transport Regulations

Pre-transport regulations are designed to ensure safe transportation of a hazardous waste from origin to ultimate disposal. In developing these regulations, EPA and the State adopted those used by the Department of Transportation (DOT) for transporting hazardous materials (49 CFR Parts 172, 173, 178, and 179). These DOT regulations require:

•Proper packaging to prevent leakage of hazardous waste, during both normal transport conditions and potentially dangerous situations, e.g., when a drum falls out of a truck

•Labeling, marking, and placarding of the packaged waste to identify the characteristics and dangers associated with transporting wastes.

These pre-transport regulations only apply to generators shipping waste off site.

Accumulation of Waste

In addition to adopting the DOT regulations outlined above, the Department has adopted EPA's regulations that cover the accumulation of waste prior to transport. A large quantity generator may accumulate hazardous waste on site for 90 days or less as long as the following requirements are met:

• Proper Storage - The waste is properly stored in containers or tanks marked with the words "hazardous waste" and the date on which accumulation began.

• Emergency Plan - A contingency plan and procedures to use in an emergency must be developed. Large quantity generators are required to have a written contingency plan, but small quantity generators are not.

• Personnel Training - Facility personnel are trained in the proper handling of hazardous waste. Large quantity generators are required to have an established training program. Small quantity generators, however, are currently exempt from this requirement, but must ensure that employees handling waste are familiar with proper procedures.

The 90-day period allows a generator to collect enough waste to make transportation more cost-effective; that is, instead of paying to haul several small shipments of waste, the generator can accumulate waste until there is enough for one big shipment.

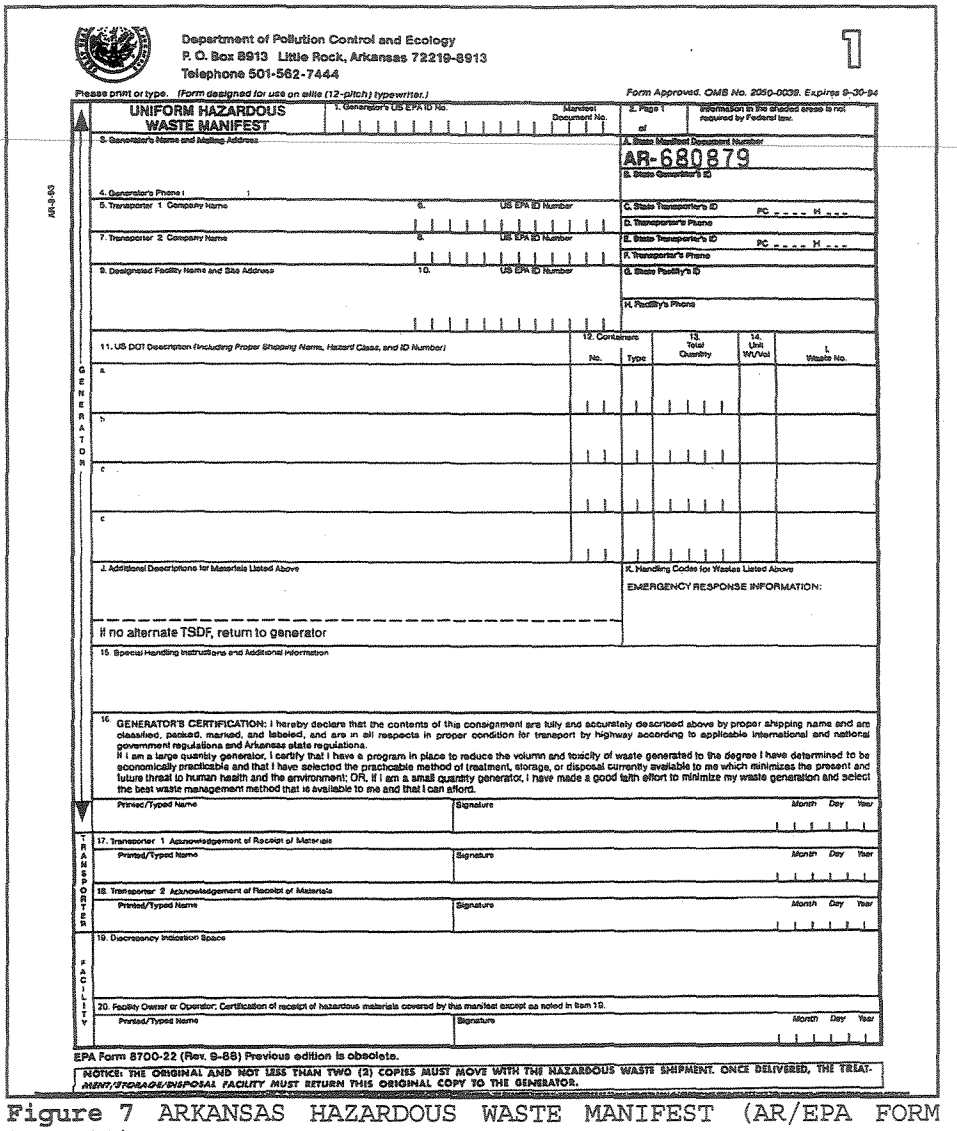
If the generator accumulates hazardous waste on site for more than 90 days, he or she is considered an operator of a storage facility and must comply with the Subtitle C requirements for such facilities. Under temporary, unforeseen, and uncontrollable circumstances the 90 day period may be extended for up to 30 days by the Director on a case-by-case basis.

Small quantity generators may store waste on site for up to 180 days, providing certain criteria are met. The on-site quantity of waste cannot exceed 6,000 kilograms at any time. The facility must have basic safety information, e.g., the telephone number of the fire department and a coordinator for emergency activities. The generator must also ensure that personnel are familiar with emergency procedures that must be followed during spills and accidents. For more information on safety requirements, see 40 CFR 262.34(d). Additionally, small quantity generators who must transport waste for 200 miles or more for off-site treatment, storage, or disposal, are allowed to accumulate waste for up to 270 days. The generator must still comply with the basic safety requirements outlined above.

The Manifest

As mentioned earlier, the HWM program is designed to manage hazardous waste from "cradle-to-grave." The Arkansas Hazardous Waste Manifest (AR/EPA Form 8700-22) is the key to this objective. Through the use of a manifest, generators and the Department can track the movement of hazardous waste from the point of generation to the point of ultimate treatment, storage, or disposal.

Arkansas does not allow the use of the Uniform Manifest, but requires the use of either the Arkansas manifest for wastes imported into the state, and either the destination state manifest or an Arkansas manifest for any wastes exported from the state.



Department of Pollution Control and Ecology
P. O. Box 8913 Little Rock, Arkansas 72219-8913
Telephone 501-562-7444

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Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

5. Transporter 1 Company Name | 6. US EPA ID Number

7. Transporter 2 Company Name | 8. US EPA ID Number

9. Designated Facility Name and Site Address | 10. US EPA ID Number

A. State Manifest Document Number: AR-680879

B. State Generator's ID

C. State Transporter's ID | PC ____ H ____

D. Transporter's Phone

E. State Transporter's ID | PC ____ H ____

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.					
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

EMERGENCY RESPONSE INFORMATION:

If no alternate TSDF, return to generator

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Arkansas state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

GENERATION / TRANSPORTER / FACILITY

AR-8-93

EPA Form 8700-22 (Rev. 9-88) Previous edition is obsolete.

NOTICE: THE ORIGINAL AND NOT LESS THAN TWO (2) COPIES MUST MOVE WITH THE HAZARDOUS WASTE SHIPMENT. ONCE DELIVERED, THE TREATMENT/STORAGE/DISPOSAL FACILITY MUST RETURN THIS ORIGINAL COPY TO THE GENERATOR.

Figure 7 ARKANSAS HAZARDOUS WASTE MANIFEST (AR/EPA FORM 8700-22)

RCRA manifests contain the:

• Name and EPA identification number of the generator, the transporter(s), and the facility where the waste is to be treated, stored, or disposed

• DOT description of the waste being transported

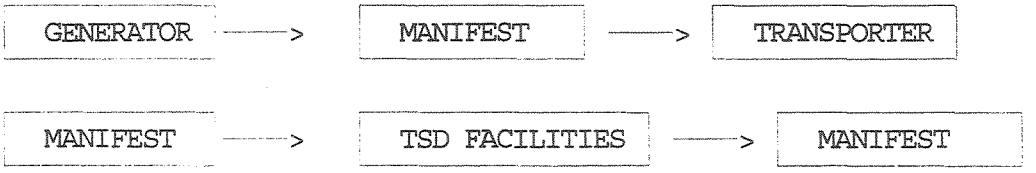
• Quantities of the waste being transported

• Address of the treatment, storage, or disposal facility to which the generator is sending waste (called the designated facility).

Each manifest contain a certification that:

• The generator has in place a program to reduce the volume and toxicity of the waste to the degree economically practicable, as determined by the generator

• The treatment, storage or disposal method chosen by the generator is the most practicable method currently available that minimizes the risk to human health and the environment.



The manifest is part of a controlled tracking system. Each time the waste is transferred, e.g., from a transporter to the designated facility or from a transporter to another transporter, the manifest must be signed to acknowledge receipt of the waste. A copy of the manifest is retained by each link in the transportation chain. Once the waste is delivered to the designated facility the owner or operator of that facility must send a copy of the manifest back to the generator. This system ensures that the generator has documentation that his or her hazardous waste has made it to its ultimate destination.

If 35 days pass from the date on which the waste was accepted by the initial transporter and the generator has not received a copy of the manifest from the designated facility, the generator must contact the transporter and/or the designated facility to determine the whereabouts of the waste. If 45 days pass and the manifest still has not been received, the generator must submit an exception report (described below).

Recordkeeping and Reporting

The recordkeeping and reporting requirements for generators provide the State with a method to track the quantities of waste generated and the movement of hazardous wastes. The generator regulations in 40 CFR Part 262 contain three primary recordkeeping and reporting requirements:

- Annual reporting
- Exception reporting
- Three year retention of reports, manifests, and test records.

Annual Reporting

Any small quantity or fully regulated generator who generated and/or transported hazardous waste off-site must submit an annual hazardous waste report to the Director by March 1 of each year. This is a more stringent requirement, as the federal program only calls for the submission of a biennial report. The report details the generator's activities during the previous calendar year and includes:

• EPA identification number and name of each transporter used throughout the year

• EPA identification number, name, and address of each off-site treatment, storage, or disposal facility to which waste was sent during the year

• Quantities and nature of the hazardous waste generated

- Efforts made to reduce the volume and toxicity of the wastes generated

- Changes in volume or toxicity actually achieved, compared with those achieved in previous years.

Generators who treat, store, or dispose of their hazardous waste on-site also must submit an annual report that contains a description of the type and quantity of hazardous waste the facility handled during the year, and the method(s) of treatment, storage, or disposal used.

Exception Reports

In addition to the annual report, generators who transport waste off-site must submit an exception report to the Director if they do not receive a copy of the manifest signed and dated by the owner or operator of the designated facility within 45 days from the date on which the initial transporter accepted the waste. The exception report must describe efforts made to locate the waste, and the results of those efforts. Small quantity generators who do not receive a copy of the signed manifest from the designated facility within 60 days must explain the exception on a copy of the original manifest and send it to the Director.

Three-Year Retention of Reports, Manifests, and Test Records

The generator must keep a copy of each annual report and any exception reports for a period of at least three years from the date the report was submitted. The generator also is required to keep a copy of all manifests for three years or until he or she receives a copy of the manifest signed and dated from the owner or operator of the designated facility. The manifest from the facility must then be kept for at least three years from the date on which the hazardous waste was accepted by the initial transporter. Finally, the records of the waste analyses and determinations undertaken by the generator must be kept for at least three years from the date the waste was last sent to an on-site or off-site TSDF. The periods of retention mentioned above can be extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Director.

LAND DISPOSAL RESTRICTIONS

One of the major impacts HSWA has had on the implementation of the RCRA program is the restriction on land disposal for certain hazardous wastes. RCRA Section 3004 restricts the land disposal of specified hazardous wastes beyond certain dates unless these wastes are treated according to treatment standards. These requirements are found in 40 CFR Part 268. The land disposal restrictions are referred to as the "land ban," and the hazardous wastes affected are called "restricted wastes."

Generator Requirements

The land disposal restrictions affect both generators and TSDFs. Generators are responsible for:

- Determining whether their waste is restricted from land disposal, and

- Ensuring that all manifested shipments of restricted wastes are accompanied by the proper records when sent to a TSDF.

All shipments of restricted wastes off-site must be accompanied by the proper records. The type of record depends on whether or not there is a treatment standard specified for that particular waste. Recordkeeping requirements for restricted wastes with treatment standards differ from those for restricted wastes without standards. These requirements are addressed separately below.

Restricted Wastes with Treatment Standards: If a generator determines that the restricted waste does not meet the designated treatment standard level, a notification must accompany the manifest to the treatment facility and must

include:

- EPA hazardous waste number
- Applicable treatment standard
- Manifest number of the waste shipment
- Waste analysis data, if available.

If the generator determines that his or her restricted waste meets the treatment standard level without the need for further treatment, the generator must supply the same notification as well as a certification stating that the waste complies with the treatment standard. The notification and certification must accompany the waste shipment to the hazardous waste disposal facility.

Restricted Wastes Without Treatment Standards: If the generator determines that treatment standards are not developed for the restricted waste, the waste may be land-disposed only if the generator prepares a demonstration and certification to accompany the manifest. The demonstration and certification attests that land disposal is the only viable alternative to manage the waste.

ADDITIONAL GENERATOR REQUIREMENTS AND EXCLUSIONS

Additional generator requirements apply to persons who export their wastes. In addition, farmers have been excluded from complying with generator requirements under certain circumstances. These requirements are discussed below.

International Shipments

Prior to HSWA, hazardous wastes could be exported from the United States with only minimal notice to EPA or the receiving country. HSWA set additional notification requirements for such exports. These requirements prohibit the export of hazardous waste unless the exporter obtains prior written consent of the receiving country. This statement must be attached to the manifest accompanying each waste shipment.

To export a hazardous waste, the EPA Administrator must first be notified by the exporter 60 days prior to when the waste is scheduled to leave the United States, with a copy of this notification provided to the Arkansas Department of Pollution Control & Ecology. This notification must be completed only for the first shipment in any 12-month period, unless basic information about the nature and frequency of the shipments changes. If the importing country agrees to accept the hazardous waste, EPA sends an "Acknowledgement of Consent" to the exporter, who may then export the waste to the importing country. Recordkeeping and reporting requirements are similar to those for domestic shipments of hazardous waste.

Farmer Exclusion

Although farmers can be generators of hazardous waste, they need not comply with the RCRA Subtitle C regulations for generators when the wastes being disposed are pesticides used only by them, and the:

- Empty pesticide containers are triple rinsed, and
- Pesticide residues are disposed on the farm following the instructions on the pesticide label.

REGULATIONS APPLICABLE TO TRANSPORTERS OF HAZARDOUS WASTE

Transporters of hazardous waste are the critical link between the generator and the ultimate off-site hazardous waste

treatment, storage, or disposal facility. The transporter regulations were developed jointly by the Department and the Arkansas Highway and Transportation Department to avoid contradictory requirements between the two agencies. Although the regulations are integrated, they are not contained in the same part of the Code of Federal Regulations (CFR). A transporter must comply with the regulations under 49 CFR Parts 171-179 (The Hazardous Materials Transportation Act) as well as those under 40 CFR Part 263 (Subtitle C of RCRA), the Arkansas Motor Carrier Act, and Regulation No. 23.

Transporters are subject to all standards covered by 40 CFR Part 263, and Section 16 of Regulation No. 23, which is broader in scope compared to 40 CFR 263. Hazardous waste transporters must additionally be permitted by both the Department of Pollution Control and Ecology and the Arkansas Highway and Transportation Department. A high level of cooperation is maintained between these two agencies to insure that their regulatory activities are not duplicated.

Generators may consign hazardous wastes to and TSD facilities may receive hazardous wastes only from transporters jointly permitted by ADPC&E and the state highway department. Persons transporting hazardous or PCB wastes in or through Arkansas must also possess a valid state permit.

A transporter under the Arkansas Hazardous Waste Management Act and Regulation No. 23 is defined as any person engaged in the off-site transportation of hazardous waste within the United States, if such transportation requires a manifest under 40 CFR Part 262. This definition covers transport by air, rail, highway, or water. The transporter regulations do not apply either to the on-site transportation of hazardous waste by generators who have their own TSDFs or to TSDFs transporting wastes within a facility.

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A Transporter is Defined as:

Any person engaged in the off-site
transportation of manifested hazardous
waste, by air, rail, highway, or water.
```

Under certain circumstances, a transporter of hazardous waste may be subject to RCRA regulatory requirements other than those contained in 40 CFR Part 263. Once a transporter accepts hazardous waste from a generator or another transporter, he or she can store it at a transfer station for up to ten days without being subject to other than the transporter regulations. However, if the storage time exceeds ten days, the transporter is considered a storage facility and must comply with the regulations for such a facility. In addition, transporters who bring hazardous waste into the United States or mix hazardous wastes of different DOT shipping descriptions in the same container are classified as generators, and must comply with the regulations applicable to generators.

REGULATORY REQUIREMENTS FOR TRANSPORTERS

A transporter is subject to a number of regulations:

- Obtaining an EPA ID number
- Obtaining a hazardous waste transportation permit
- Complying with the manifest system
- Handling hazardous waste discharges.

EPA ID Number

One way that the Department keeps track of transporters is by requiring each transportation company to obtain a unique ID number from EPA. Without this identification, the transporter is forbidden from handling any hazardous waste. Furthermore, a transporter may not accept waste from a generator unless that generator has an EPA ID number (or State Tracking Number for conditionally exempt small quantity generators).

The Manifest

In summary, the transporter is required to deliver an entire quantity of waste accepted from either the generator or another transporter, to the designated facility listed on the manifest. If the waste cannot be delivered as the manifest directs, the transporter must inform the generator and receive further instructions, i.e., return the waste or take it to another facility. Before handing the waste over to a TSDF, the transporter must have the owner or operator sign and date the manifest. One copy of the manifest remains at the TSDF while the other stays with the transporter. The transporter must retain a copy of the manifest for three years from the date the hazardous waste is accepted by the initial transporter.

As noted above, one of the goals of the hazardous waste management program is to foster resource recovery and recycling. There is a special exemption from all the normal manifest requirements for transporters who handle certain reclaimed wastes from small quantity generators. The waste must be reclaimed under a contractual agreement that specifies the type of waste and frequency of shipments. The vehicle used to transport the waste from the recycling facility also must be owned and operated by the reclaimer of the waste. The generator is responsible for keeping a copy of the reclamation agreement for three years after the agreement ends.

Handling Hazardous Waste Discharges

Even if generators and transporters of hazardous waste comply with all appropriate regulations, transporting hazardous waste can still be dangerous. There is always the possibility that an accident will occur. To respond to this possibility, the regulations require transporters to take immediate action to protect health and the environment if a release occurs, (e.g., notifying local authorities and/or diking the discharge area).

The regulations also give certain officials special authority to handle transportation accidents. Specifically, if a Federal, State, or local official, with appropriate authority, determines that the immediate removal of the waste is necessary to protect human health or the environment, the official can authorize waste removal without the use of a manifest by a transporter who lacks an EPA ID number.

When a serious accident or spill occurs, the transporter must notify the National Response Center (NRC), Arkansas Office of Emergency Services, and the Arkansas Highway Police. Specifically, these agencies must be notified when:

- A person is killed or seriously injured
- Estimated damage exceeds $50,000
- The spill involves disease-causing agents or radioactive material
- The spill exceeds a Superfund reportable quantity
- A life-threatening situation exists.

The Center for Disease Control must also be informed if the spill involves disease-causing agents. Within 15 days of the incident, the transporter must file a report with DOT. If hazardous wastes were involved in the spill, the transporter must supply a copy of the hazardous waste manifest and an estimate of the quantity of waste removed

from the site, where it was taken, and the disposition of any unremoved waste. Consumer commodities, batteries, and small containers of paint are exempt from the 15-day notification requirement.

REGULATIONS APPLICABLE TO TREATMENT, STORAGE AND DISPOSAL FACILITIES

Treatment, storage, and disposal facilities (TSDFs) are the last link in the "cradle-to-grave" hazardous waste management system. The Arkansas Hazardous Waste Management Act and RCRA Subtitle C require all TSDFs that handle hazardous waste to obtain an operating permit (a process described in the next chapter) and abide by treatment, storage, and disposal (TSD) regulations. The TSD regulations establish design and operating criteria as well as performance standards that owners and operators must meet to protect human health and the environment. Because treatment, storage, and disposal involves many different types of units (e.g.,a landfill or an incinerator), these regulations are far more extensive than those just described for generators and transporters. Because of this extensiveness, this chapter provides only a summary of the TSD requirements. To obtain the details, the reader is encouraged to examine 40 CFR Parts 264 and 265.

Permit Standards.

A strict regulatory scheme has been developed for hazardous waste management facilities. Facilities are subject to all standards, including 40 CFR 264, 265, and additional requirements established in Section 13, Regulation No. 23 (Hazardous Waste Management). These additional requirements are referenced at pages I-45, I-118, and I-126 in Arkansas' 1985 Final Authorization Document.

In addition to incorporating federally imposed requirements, Regulation No. 23 (Hazardous Waste Management) is more stringent in its provisions for:

1) Facility Siting - The general siting criteria for facilities is detailed in Section 5 of Regulation No. 23. It was written with respect to the State's unique physiography.

2) Certification of TSD Operators: Section 10 of Regulation No. 23 requires that personnel procedures and training for hazardous waste facility operators be approved by the Department. The Department evaluates the background and qualifications of facility operators through a committee of internal staff.

3) Baseline Health Surveys: As a condition of facility permitting, The Department may require that prior to operation, new commercial TSD facilities conduct a survey to establish baseline health data. These surveys are discussed in detail at Section 14 of Regulation No. 23.

The definition of a TSDF, according to 40 CFR 260.10, encompasses three different functions:

Treatment - Any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize it, or render it nonhazardous or less hazardous, or to recover it, make it safer to transport, store or dispose of, or amenable for recovery, storage or volume reduction.

Storage - The holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed, or stored elsewhere.

Disposal - The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

REGULATORY REQUIREMENTS

The original RCRA legislation established two categories of TSDFs based on a facility's permit status. The first category is made up of "interim status" facilities, ones that have not obtained a permit. Although Section 3005(a) of RCRA specifies that facilities must obtain a permit to operate, Congress, in developing this requirement, recognized that it would take many years for EPA to issue all permits. Therefore, it established interim status under Section 3005(e) of RCRA Act. This allows owners and operators of facilities in existence on November 19, 1980 (or brought under Subtitle C regulation due to an amendment), who meet certain conditions, to continue operating as if they have a permit until their permit application is issued or denied. The second category is made up of facilities that have permits.

Under the Arkansas Hazardous Waste Management Act and RCRA two sets of regulations are provided for; one for interim status TSDFs, the other for permitted TSDFs. The interim status requirements differ from those for permitted facilities because in the absence of permits, the interim status requirements needed to be self-implementing. The interim status requirements have neither site-specific provisions nor provisions that require negotiations between EPA, the State, and the owner or operator.

Incinerators that did not submit a final permit application by November 1986 lost interim status in November 1989. All other facilities lose interim status in November 1992, unless they submitted an application by November 1988. Land disposal facilities that did not apply by November 1985 lost interim status in November 1985.

The interim status standards, found in 40 CFR Part 265, are primarily "good housekeeping practices" that owners and operators must follow to properly manage hazardous wastes during the interim status period. The permit standards, on the other hand, found in 40 CFR Part 264, are a mix of performance standards and "design and operating" criteria that permit writers include in facility-specific permits. Both interim status and permit standards consist of two types of requirements:

1) Administrative and nontechnical requirements

2) Technical and unit-specific requirements.

Because the administrative and nontechnical requirements are nearly identical for interim status and permit standards, they are discussed together in this chapter. However, the technical requirements applied to interim status and permitted facilities are significantly different and thus are discussed separately. The technical requirements for interim status facilities (40 CFR Part 265) are discussed before those for permitted facilities (40 CFR Part 264) to reflect the chronological order in which these two sets of requirements are applied (existing facilities move from interim to permitted status). Thus, the regulatory requirements portion of this chapter is broken into three parts. The first part describes the administrative and nontechnical requirements that apply to both interim status and permitted facilities. The second part describes the technical requirements that apply to interim status facilities. The third part describes the technical requirements with which permitted facilities must comply. The land disposal restrictions schedule mandated under HSWA for curtailing the land disposal of untreated hazardous waste is discussed at the end of this chapter.

ADMINISTRATIVE AND NONTECHNICAL REQUIREMENTS FOR INTERIM STATUS AND PERMITTED TSDFs

The purpose of the administrative and nontechnical requirements is to ensure that owners and operators of TSDFs establish the necessary procedures and plans to run a facility properly and to handle any emergencies or accidents. They are in Subparts A through E of 40 CFR Parts 264 and 265D, as incorporated by reference in Regulation No. 23, which are applicable to permitted and interim status facilities, respectively.

Subpart A - Who is Subject to the Regulations?

Subpart A outlines who is subject to the TSD regulations and any circumstances under which a person is excluded or only subject to limited requirements. In general, all owners or operators of facilities treating, storing, or disposing of hazardous waste must meet the appropriate TSD regulations. The exceptions to this include:

- A farmer disposing of pesticides from his own use
- The owner or operator of a totally enclosed treatment facility
- The owner or operator of an elementary neutralization unit or a wastewater treatment unit
- A person cleaning up a hazardous waste spill or discharge
- Facilities that reuse, recycle, or reclaim hazardous waste (except persons who produce, burn, and distribute hazardous waste-derived fuel and used oil recyclers)
- Generators (including small quantity generators) accumulating wastes within the time periods specified in 40 CFR Part 262
- A transporter storing manifested shipments less than 10 days

In addition, owners or operators of facilities regulated by other environmental laws under a permit-by-rule (e.g., publicly owned treatment works, underground injection wells) only need meet minimum TSD requirements.

Subpart B- General Facility Standards

Before handling any hazardous wastes, every facility owner or operator must apply to ADPC&E for an identification number. Owners and operators also must ensure that their wastes are properly identified and handled, that facilities are secure and operating properly, and that personnel working at facilities are trained in hazardous waste management. To satisfy these conditions, owners and operators must take the following actions.

1. Conduct Waste Analyses - Waste analyses are conducted prior to treatment, storage, and disposal. This ensures that owners or operators possess sufficient information on the properties of the waste they manage to be able to treat, store, or dispose of them in a manner that will not pose a threat to human health or the environment. The regulations require owners or operators to perform detailed chemical and physical analyses of their wastes, to develop and follow a written waste analysis plan that specifies tests and test frequencies, and to test any incoming wastes.

2. Install Security Measures - The security requirements were developed to prevent the unknowing entry of people and minimize the potential for the unauthorized entry of people or animals onto the active portions of facilities. To meet these security objectives, a barrier surrounding the active portion of the facility with controlled entry systems or 24-hour surveillance must be installed and warning signs posted. Owners or operators also must take precautions to avoid fires, explosions, generation of toxic gases, and any other events that would threaten human health, safety, and the environment. Owners and operators are exempt from these requirements: (1) if unauthorized or unknowing entry will not result in injury, and (2) if the disturbance of waste or equipment will not result in environmental damage.

3. Conduct inspections - The regulations require an owner or operator to develop and follow a written inspection schedule to assess the status of the facility and detect potential problem areas. Any observations made during the inspections are recorded in the facility's operating log and kept on file for three years. All problems found must be remedied.

4. Conduct Training - The purpose of the training requirement is to reduce the potential for mistakes that might threaten human health and the environment. This is accomplished by ensuring that facility personnel acquire expertise in the areas to which they are assigned. The requirements specify when facility personnel must be trained (e.g., six months after beginning a job), the records to be maintained, and the minimum frequency with which the initial training received by the employees must be updated. Both on-the-job training and in-house training programs may be used to meet the training requirements. Training requirements have also been placed on TSDFs by the Occupational Safety and Health Administration (OSHA). OSHA requires TSDFs to implement a hazard communication plan, medical surveillance program, health and safety plan for employees, decontamination procedures, and to provide a minimum of 24 hours of safety training. The training requirement may be waived if the employee has had equivalent training or work experience.

5. Properly Manage Ignitable, Reactive, or Incompatible Wastes - In general, all ignitable or reactive wastes must be protected from sources of ignition or reaction or treated to remove the cause of concern. Owners or operators also must make sure that treatment, storage, or disposal of ignitable, reactive, or incompatible waste does not result in damage to the containment structure (container, tank, surface impoundment, landfill cell, or pit) and/or threaten human health or the environment. Incompatible wastes must not be placed in the same containment structure if there is the potential for reaction.

6. Comply With Location Standards - Current location standards prohibit siting a new facility in a location where flood or seismic events could affect a waste management unit. Bulk liquid wastes are also prohibited from placement in salt domes, salt beds, or underground mines or caves.

General Siting Criteria:

In addition to the general location standards found in 40 CFR 264.18, ADPC&E has adopted more restrictive general siting criteria for new treatment, storage, and disposal (TSD) facilities.

No permit will be issued for a new TSD facility located in an active fault zone, a "regulatory floodway", a 100-year floodplain, a recharge zone of sole source aquifer or a "wetland area" which is inundated or saturated by surface or groundwater unless the applicant affirmatively demonstrates and the Department specifically finds that the location of the facility in this area would not constitute a risk to the public health or the environment.

In addition, no permit will be issued for a hazardous waste landfill or surface impoundment that is located in the following areas:

- Of high earthquake potential.

- Soil which would be classified as vertisol or as having a subgroup modifier of vertic.

- Where a stratum of limestone or similar rock of an average thickness of more than three feet lies within 99 feet of the base of the proposed liner system.

- Where bottom of the liner system or in-place soil barrier is less than 10 feet above the historical high water table.

- Close to any functioning public or private water supply.

No permit shall be issued for the construction or operation of a new commercial hazardous waste landfill, if the active portions of the facility are located within one-half mile of any occupied dwelling, church, school, hospital or similarly occupied structure at the time the initial permit application is submitted to the Department unless the applicant affirmatively demonstrates and the Department specifically finds that the location of the facility in this area would not constitute a risk to the public health or the environment.

No permit shall be issued for a hazardous waste TSD facility, if the area and configuration of the facility's property is such that the distance between active portions of the facility and the facility's property line is less than 200 feet; or the active portions of the facility are located less than 300 feet from the right-of-way for a public road, pipelines carrying natural gas, fuel oils or chemicals, water and wastewater lines, and power transmission lines. The Department of Pollution Control and Ecology will consider the instances in which the permit applicant can demonstrate that location of such facilities in the above areas would not constitute a risk to the public health or environment.

The above restrictions do not apply to treatment facilities which began operation prior to March 14, 1979, or which had an existing operating permit issued by the Department of Pollution Control and Ecology, or to any subsequent modifications to such facilities, provided that the owner of such facility affirmatively demonstrates and the Department specifically finds that the location of the facility in this area would not materially increase the degree of hazard associated with the facility.

Environmental Equity

Act 1263 of 1993, codified at A.C.A. §§ 8-6-1501 *et seq.*, requires the consideration of "environmental equity" in the siting of new high impact solid waste management facilities, which includes hazardous waste treatment, storage, or disposal facilities. Enactment of Act 1263 was prompted by a court ruling from Washington County Chancery Court declaring Act 933 of 1991 (currently codified at A.C.A. 8-6-218) to be unconstitutional local and special legislation. Rather than appeal this ruling, the Department convinced the sponsors of Act 933 that a more appropriate fix would be a law which was clearly of general applicability and continued to address their specific concerns. As a result, Arkansas became the first state in the nation to enact legislation addressing the concept of "environmental equity."

The "environmental equity" concept was prompted by recent national surveys which recognized a trend of locating environmentally "undesirable" facilities in areas populated predominantly by the poor and politically disenfranchised. Act 1263 creates a rebuttable presumption against the permitting of "high impact solid waste facilities" within a 12 mile radius of an existing high-impact solid waste management facility. Such facilities include solid waste landfills and incinerators and hazardous waste treatment, storage and disposal facilities. This presumption may be rebutted if the applicant proves there is no other suitable site for his proposed facility because of geological constraints or existing siting restrictions codified at A.C.A. § 8-7-206(b)(2); or if the local community manifests acceptance of the facility because of provided incentives such as increased employment opportunities, payment of reasonable host fees, contributions by the facility to the community infrastructure, compensation of any adjacent landowners for any assessed decrease in property values, or subsidization of community services.

The provisions of Act 1263, like those of A.C.A. § 8-7-206(b)(2), are more stringent than federal requirements. The apparent ban on siting hazardous waste treatment. storage, and disposal facilities within 12 miles of an existing facility does not violate the provisions of 40 CFR 271.4 (which prohibits the authorization of any aspect of State law or the State program which has no basis in human health or environmental protection and which acts as a prohibition on on the treatment, storage, or disposal of hazardous wastes in the State) because of the rebuttable presumption. Furthermore, the provisions of Act 1263 are consistent with recent federal initiatives to implement the concepts of environmental juctice in the federal RCRA hazardous waste management program.

Certification of Commercial Hazardous Waste Facility Operators

In addition to the requirements found in 40 CFR Parts 264 and 265, ADPC&E has adopted more stringent requirements for certification of commercial TSD facility operators and personnel.

ADPC&E requires that at least one person, certified by the Department, shall be on duty or on fifteen-minute call at all times while a commercial TSD facility is being operated. In some cases, more than one person may be required to be on duty at all times.

These operators must have the following qualifications:

- Physically capable to perform all tasks.

- Baccalaureate degree in engineering, physical science, health science or related disciplines, or four years of significant demonstrated experience in such fields.

- At least four additional years of experience in management, engineering or in conducting chemical/physical analysis.

- Working familiarity with the principles and requirements relative to industrial hygiene, worker safety, emergency procedures, and environmental protection.

- Basic knowledge of the principles of operation and standard operating procedures for all equipment used in the facility.

- Citizen of the United States, of good moral character with no prior conviction of a felony or a crime of moral turpitude.

Personnel Training.

ADPC&E also imposes requirements for personnel training in addition to those found in 40 CFR 264.16. In addition to maintaining records prescribed in 40 CFR 264.16(d), owners and operators of commercial TSD facilities shall:

1. Maintain complete updated records of all workers assigned to specific jobs, including name, address, date of starting specific job and date of termination of specific job.

2. Maintain a complete previous employment history and a complete job mobility history within the facility for each employee.

3. Have their personnel trained in contingency procedures as prescribed in the facility's contingency plan, which plan has been submitted and approved pursuant to the Hazardous Waste Management Code.

4. Have their personnel take part in semi-annual reviews and updates of their initial training in contingency plans, which has previously been submitted to the Department and approved.

5. Have each of their personnel undergo an annual health physical. Spouses shall be offered an annual physical.

Whenever modification of training is required by direction of the Department or as a modification of permit conditions, owners and operators shall promptly comply.

Performance Standards

The following standards apply, in addition to those of 40 CFR 264 and 265 incorporated in Regulation No. 23, to all hazardous waste management facilities:

The capacity of hazardous waste storage facilities associated with a treatment facility shall not exceed a volume equal to ninety times the permitted daily processing rate of the treatment process; unless the Commission finds that a lesser volume is required to provide adequate protection of public health and safety or applicant affirmatively demonstrates

and the Commission finds that such a restriction shall unduly inhibit the use of the most acceptable method or methods available for treatment. These requirements do not apply to wastewater treatment facilities which are designed and operated to meet state and federal water pollution control regulations.

Each hazardous waste management facility must be designed to operate in such a manner that any emissions from the facility will comply with the provisions of the Arkansas Hazardous Waste Management Act of 1979, as amended (codified at A.C.A. §§ 8-7-201 *et seq.*), the provisions of Regulation No. 23 (Hazardous Waste Management) , and all applicable state and federal standards concerning air and water quality. The transfer, handling and storage of materials must not violate state and federal standards concerning worker safety or create unreasonable hazards to the environment or to the health and welfare of the people living and working in or near such a facility.

When it is technically feasible that destruction of the waste can be accomplished by incineration utilizing currently available technology, no acutely hazardous waste shall be disposed of in landfills in the State of Arkansas unless the applicant can demonstrate that the waste is not included in Class I high hazard materials as defined in the Chemical Manufacturer's Association's "A System for Management of Hazardous Wastes by Degree of Hazard Under Subtitle "C" of RCRA" dated July 30, 1979 or as revised or amended thereto after approval by the Commission.

Incineration will be deemed technically feasible by the Director for destruction of all acutely hazardous materials for which disposal in landfills is not allowed unless:

1) The generator or the disposer can demonstrate to satisfaction of the Director that incineration is not technically feasible;

2) It is generally accepted by the scientific community that incineration would not be technically feasible or that incineration would not produce the desired results;

3) Incineration would not appreciably reduce the degree of hazard; or

4) The toxicity of the waste results primarily from inorganic materials which are not destroyed by incineration.

The Director may give a waiver to this subsection (Reg. No. 23 § 13a(4)) if it can be demonstrated to his satisfaction that a process other than incineration is available and will be used that would destroy or permanently immobilize the hazardous components of the waste prior to landfilling.

No materials in the form of bulk liquids, semi-solids, and sludges may be disposed of in hazardous waste landfills unless such waste is pretreated and/or stabilized into cement-like material. Under no circumstances may municipal refuse be placed in a hazardous waste landfill.

Waste Minimization

Anyone who generates a hazardous waste in the State of Arkansas is required to submit an annual report under provisions of ADPC&E Regulation No. 23, § 16d, containing a description of the efforts undertaken in the preceding year regarding waste minimization, as well as a description of any change in volume or toxicity of hazardous wastes generated. Generators must submit annual reports and manifest certifications regarding efforts taken to minimize the amounts and toxicity of wastes. Each individual manifest requires the facility manager to certify that he has established a waste minimization program and is taking necessary efforts to reduce the volume and/or toxicity of the waste generated.

RCRA permits for the treatment, storage, or disposal of hazardous waste on the premises where the waste was generated must contain a certification by the permittee regarding efforts taken to minimize the amount and toxicity

of the generated wastes. TSD facilities generating hazardous wastes or residues from waste treatment must also certify their waste minimization efforts on individual manifests and in the state annual hazardous waste reports. Federal regulations at 40 CFR 264.70, 264.73 and 270.30(j)(2) are incorporated by reference in state hazardous waste regulations, and require the TSD facility to provide the Director with satisfactory documentation that any resulting wastes have been neutralized to the extent possible by technology or have no other approved means of treatment.

Arkansas's hazardous waste activity and Remedial Action Trust Fund contribution fees are based upon a sliding scale, increasing with the total amount of wastes generated by a given generator or facility. These fees provide an additional, financial incentive to reduce the amounts of wastes generated.

Subparts C & D - Preparedness and Prevention, and Contingency Plan and Emergency Procedures

These two subparts, originally grouped as one, were developed to prepare for emergencies. The preparedness and prevention requirements are explicit (e.g., installing fire protection equipment and alarms and arranging for coordination with the local authorities in emergency situations). They are intended to minimize the possibility and effects of a release, fire, or explosion. Contingency plan requirements are the logical next step. They require an owner or operator to develop an action plan for emergency situations. One of the key requirements of this plan is the designation of an emergency coordinator who is responsible for directing response measures and reducing the adverse impacts of hazardous waste releases.

Subpart E - Manifest System, Recordkeeping, and Reporting

These requirements specify that the manifest be returned from the facility owner or operator to the generator, thus completing the manifest loop established in the manifest regulations (40 CFR Part 262). When the owner or operator of the TSDF receives the waste, he or she is responsible for ensuring that the waste described on the manifest is the same as the waste on the truck. This ensures that there are no significant discrepancies in the amount (e.g., an extra drum) or type of waste (e.g., acid waste instead of paint sludge) that was sent by the generator. If a significant discrepancy is discovered, the TSDF must reconcile the difference with the generator or transporter. If this is impossible, EPA must be notified about the problem within 15 days of the incident.

In addition to the manifest requirements, Subpart E also includes requirements for recordkeeping and reporting. This includes operating records, biennial reports, unmanifested waste reports, and reports on releases, ground-water monitoring, and closure. Records and reports provide the regulating authority with the information used in assessing compliance with the hazardous waste regulations. They also provide facility owners and operators, and local authorities, with information that may be used in responding to emergencies.

INTERIM STATUS (PART 265) TECHNICAL REQUIREMENTS

The objective of the interim status technical requirements is to minimize the potential for environmental and public health threats resulting from hazardous waste treatment, storage, and disposal at existing facilities waiting to receive an operating permit. The two groups of interim status requirements are:

1) General standards applying to several types of facilities

2) Specific standards applying to each waste management method.

An owner or operator of an interim status facility can find the applicable technical requirements in Subparts F through BB of 40 CFR Part 265, as incorporated by reference at Regulation No. 23 § 3a(6).

INTERIM STATUS GENERAL STANDARDS

The general standards cover three areas:

1) Ground-water monitoring requirements (Subpart F)

2) Closure, post-closure requirements (Subpart G)

3) Financial assurance (Subpart H).

Subpart F - Ground-Water Monitoring

Ground-water monitoring is required only for owners or operators of surface impoundments, landfills, and land treatment facilities used to manage hazardous waste. The purpose of these requirements is to assess the impact of a facility on the ground water beneath it. All or part of the requirements for ground-water monitoring may be waived if the facility can demonstrate that there is a low potential for migration of contaminants to the uppermost aquifer. For example, a surface impoundment located in highly adsorbent soils may qualify for this exemption. If wastes remain at the site, monitoring must continue for 30 years (or more) after the facility has closed. The interim status ground-water monitoring program consists of:

Development and installation of a monitoring system

Background monitoring

Routine monitoring and evaluation

Conducting assessments

Reporting requirements.

Development and Installation of a Monitoring System

The ground-water monitoring program outlined in the regulations requires a monitoring system of at least four wells to be installed, one upgradient from the waste management unit and three downgradient. (It is important to note that these are the minimum required.) The downgradient wells must be placed so as to intercept any waste migrating from the unit, should such a release occur. The upgradient wells must provide data on ground water that is not influenced by waste coming from the waste management unit (called background data). If the wells are properly located, comparison of data from upgradient and downgradient wells should indicate if contamination is occurring.

Background Monitoring

Once the wells have been installed, the owner or operator collects quarterly data for one year to establish background concentrations for selected chemicals. These data form the basis for all future comparisons. If the TSDF suspects that contaminants are already migrating to the ground water, this step may be skipped and the facility would comply immediately with the assessment monitoring requirements. There are three sets of indicator parameters for which background concentrations are established:

1) Drinking water parameters

2) Ground-water quality parameters

3) Ground-water contamination parameters.

Routine Monitoring and Evaluation

Following the establishment of background levels, routine monitoring begins. Monitoring examines ground water for elevated levels of ground-water quality parameters annually and ground-water contamination parameters semi-annually. The results of routine monitoring are background values and tested statistically to determine whether significant increases (or decreases in the case of pH) have occurred in the indicator parameters. If comparisons show a difference, then the Director must be notified within 7 days and an assessment program instituted.

Assessment Program

If a statistically significant increase (or decrease in the case of pH) over background is detected for any of the indicator parameters, the owner or operator must implement a ground-water assessment program to determine whether hazardous waste is actually entering ground water. The assessment program, based on a previously developed plan, requires the owner or operator to determine what is contaminating the groundwater, the extent of contamination, and the rate of the contaminant migration. Within 15 days of conducting this assessment, a report on ground-water quality must be submitted to the Director.

If the results of the ground- water assessment show no contamination by hazardous waste, then the owner or operator resumes routine monitoring for the indicator parameters. However, if the assessment shows hazardous waste contamination, then the owner or operator must continue assessing the extent of ground-water contamination quarterly until the facility is closed or further monitoring is required as a result of the permitting process. Corrective action may be required to remedy the release.

Reporting Requirements

Several ground-water monitoring reports are required. During the first year, when initial background concentrations are being established, a report on each quarterly well analysis must be submitted within 15 days of the analysis. From the second year on, an annual report must be submitted providing the results of monitoring for:

- Indicators of ground-water contamination
- Ground water elevation
- Changes in background levels
- Ground-water Contamination Aassessments

An owner or operator may also use an alternate ground-water monitoring system if, given the facility's unique hydrogeological situation, the one prescribed in the regulations is not capable of yielding unbiased samples.

Subpart G - Closure/Post-Closure

Closure is the period when wastes are no longer accepted, during which owners or operators of TSDFs complete treatment, storage, and disposal operations, apply final covers to or cap landfills, and dispose of or decontaminate equipment, structures, and soil. Post-closure, which applies only to land-disposal facilities, is normally a 30-year period after closure during which owners or operators of disposal facilities conduct monitoring and maintenance activities to preserve the integrity of the disposal system. The Department may either extend or shorten the time required for post-closure monitoring. The period may be shortened if the Department finds that the reduced period will still protect human health and the environment. Conversely, post-closure may be lengthened if necessary to protect human health and the environment.

The purpose of the closure and post-closure requirements is to ensure that all facilities are closed in a manner that (1) minimizes the need for care after closure and (2) controls, minimizes, or eliminates the escape of waste, leachate, contaminated rainfall, or waste decomposition products to soils, ground or surface waters, and the atmosphere.

Closure

An owner or operator must develop a plan for closing the facility and keep it on file at the facility until closure is completed and certified. This plan must include:

- A description of how the facility will be closed
- An estimate of the maximum amount of waste the facility will handle
- A description of the steps needed to decontaminate equipment and remove soils and debris during closure
- An estimate of the year of closure
- A schedule for closure

The plan may be amended at any time during the active life of the facility. Furthermore, the plan must be amended whenever design and operation changes that affect the closure plan occur. Prior to closure, the plan is submitted to the Director for approval. The Director, in turn, must provide both the owner or operator and the public an opportunity to comment on the plan. Following the comment period, the Director must make a decision to approve, modify, or disapprove the plan. Closure activities occur according to a timetable outlined in the regulations. This timetable is subject to change by the Director.

During closure, the owner or operator must treat, remove from the site, or dispose of on site, all hazardous waste in accordance with the approved closure plan. Once closure is completed, the owner or operator certifies that the facility has been properly closed. As part of closure activities, a survey plat indicating the location and dimensions of landfill cells or other disposal areas is submitted to the local land authority and the Director. This plat preserves a record of the TSDF that can be referenced in future years. A notation on the deed to the facility property also must be made to notify potential purchasers of the property that the land was used to manage hazardous waste.

Post-Closure

Post-closure is required for land disposal facilities that do not "clean close" (see below). When a land disposal facility is closed, it must be monitored for 30 years to ensure the integrity of any waste containment systems and to detect contamination. Post-closure care consists of at least the following:

- Ground-water monitoring and reporting
- Maintenance and monitoring of waste containment systems
- Security

Like the closure requirements, a post-closure plan outlining activities is developed and kept at the facility until post-closure care begins. This plan may be amended at any time, and an amendment is required if there is any change that affects the plan. Post-closure plans are submitted and reviewed in the same manner as closure plans. The post-closure care period may be lengthened or shortened by the Department if warranted.

Clean Closure

Owners or operators of surface impoundments and waste piles that remove all contaminants from the unit may "clean close" the unit. This means that all wastes have been removed from the unit. If this is successfully demonstrated, post-closure care is not required.

At a minimum, owners and operators of surface impoundments and waste piles that wish to clean close must conduct soil analyses and ground-water monitoring to confirm that all wastes have been removed from the unit. Individual requirements (i.e., contaminant concentrations and clean-up standards) for each facility are defined on a site-specific, case-by-case basis.

Subpart H - Financial Requirements

Financial requirements were established to assure that funds are available to pay for closing a facility, for rendering post-closure care at disposal facilities, and to compensate third parties for bodily injury and property damage caused by sudden and non-sudden accidents related to the facility's operation. One important purpose of financial assurance is to prevent RCRA sites from requiring cleanup under Superfund or RATFA. Ensuring that funds are available for closure, post-closure, and liability helps minimize the need for future Superfund or RATF activities and/or expenditures.

Under Subpart H, there are two kinds of financial requirements:

1) Financial assurance for closure/post-closure

2) Liability coverage for injury and property damage (sudden and non-sudden occurrences).

State-operated facilities and the Federal Government are exempted from these requirements.

Financial Assurance for Closure/Post-Closure

The first step owners and operators must take in meeting the financial assurance requirements is to prepare written cost estimates for closing their facilities. If post-closure care is required, a cost estimate for providing this care must be prepared as well. These cost estimates must reflect the actual cost of conducting all the activities outlined in the closure and post-closure plans and are adjusted annually for inflation. The cost estimate for closure is based on the point in the facility's operating life when closure would be the most expensive. Cost estimates for post-closure monitoring and maintenance are based on projected costs for the entire post-closure period.

Following the preparation of the cost estimates, the owner or operator must demonstrate the ability to pay the estimated amounts. This is known as financial assurance. There are six mechanisms for complying with closure and post-closure financial responsibility. All are adjusted annually for inflation, or more frequently, if cost estimates change. The six mechanisms are:

° Trust fund

° Surety bond

° Letter of credit

° Closure/post-closure insurance

° Corporate guarantee

° Financial test.

Any of the mechanisms can be used in conjunction with each other to meet the financial assurance requirements. However, if a corporate guarantee and the financial test are combined, the owner or operator must certify that his or her financial statements are not consolidated with those of the guarantor. An owner or operator may also use one of the six mechanisms to meet the financial requirements of multiple facilities.

When an owner or operator selects a trust fund for financial assurance, he is placing money into a special account. Annual payments must be made into this account for either 20 years or the remaining operating life of the facility, whichever is shorter. During this "pay-in" period, as it is called, deposits must equal the current cost estimate minus the current value of the trust fund, divided by the number of years remaining in the pay-in period. Thus, the trust fund should contain a sum equal to the cost estimate at the end of the pay-in period.

If either a surety bond, a letter of credit, or closure/post-closure insurance is selected as the assurance mechanism, the owner or operator is purchasing a third-party guarantee that sufficient funds will be available for closure/post-closure activities. The corporate guarantee mechanism works on this same principle. The parent company that owns the facility provides a written guarantee that sufficient funds are available.

The financial test works on yet a different principle. The owner or operator of a facility can assure, by means of a financial test, that sufficient funds exist within the company to pay for closure/post-closure activities. The financial test is also used to test the financial strength of a parent company's "corporate guarantee."

A facility may use State financial mechanisms to meet the financial assurance requirements, if the Regional Administrator determines that the mechanisms are equivalent to those just discussed. A State mechanism may be used exclusively or in combination with the Federal mechanisms to achieve the full level of assurance that is required. Arkansas does not employ a State financial mechanism at this time.

The financial test and corporate guarantee have been increasingly popular methods for compliance with the RCRA financial assurance requirements. (EPA recently amended the liability requirements to allow the use of the corporate guarantee as a method of compliance). This popularity is due to the flexibility of the methods. Funds do not have to be placed in escrow, nor does a premium have to be paid annually. However, these more lenient requirements make enforcement of financial responsibility difficult if firms file for bankruptcy and fail to pay for closure, post-closure, or liability costs.

Liability Coverage

An owner or operator is financially responsible for bodily injury and property damage to third parties caused by a sudden accidental occurrence or a non-sudden accidental occurrence due to operations at a facility. Sudden occurrences are usually due to an accident, such as an explosion or fire. Non-sudden occurrences take place over a long period of time, (e.g., ground-water contamination).

- Sudden Accidental Occurrences - An owner or operator of a TSDF must have liability coverage of $ 1 million per occurrence with an annual aggregate of $2 million, exclusive of legal defense costs. This liability coverage may be demonstrated using any of the six mechanisms allowed for assurance of closure and post-closure. In addition, owners or operators may obtain guarantees from corporate "siblings" or "grandparents," or from firms with which they have a "significant business relationship."

- Non-Sudden Accidental Occurrences - Additionally, an owner or operator of a surface impoundment, landfill, land treatment facility, or group of such facilities must maintain liability coverage for non-sudden accidental occurrences. Owners or operators must maintain $3 million per occurrence with an annual aggregate of $6 million, exclusive of legal defense costs. Liability coverage may be demonstrated in the same ways as sudden liability is demonstrated.

The same mechanisms may be used to supply assurance for both types of accidental coverage (sudden and

non-sudden), however, coverage must total at least $4 million per occurrence with an $8 million annual aggregate.

INTERIM STATUS SPECIFIC STANDARDS

Subparts I through BB of 40 CFR Part 265, incorporated by reference in Regulation No. 23, consist of requirements tailored to specific waste management methods:

Containers
Tanks
Surface impoundments
Waste piles
Land treatment units
Landfills
Incinerators
Other thermal treatment units
Chemical, physical, and biological treatment units
Underground injection wells.
Drip pads
Process vents
Equipment leaks

While the requirements are specific to the type of waste management practice, there are common elements in each of them. These are:

Waste analysis
Monitoring and inspection
Closure/post-closure
Recordkeeping
Requirements for ignitable, reactive, and incompatible wastes
General operating requirements.

The first five elements have the same objectives as the corresponding general standards discussed earlier, except that additional requirements have been added for each waste management method, (e.g., an owner or operator of a tank in addition to developing an inspection plan, must inspect the tank for cracks or signs of leakage). The method-specific requirements for those five elements are beyond the scope of an orientation manual, but can be found in the regulations (40 CFR Part 265, Subparts I through X).

General Operating Requirements

The general operating requirements specify operating procedures for each waste management method. These operating procedures are the tools used by the Department to ensure that wastes are properly managed. The operating requirements for each of the ten waste management methods are discussed below.

Subpart I - Containers

Drums and containers are frequently used to accumulate and store wastes. In the past, persons using waste drums often put them somewhere out of sight, without any further concern about what might happen to residues in the containers. The drums eventually weathered and corroded, releasing their contents, posing threats to human health and the environment. Recognizing that elementary and straight forward precautions may eliminate these problems, the Department requires basic good management practices. The container regulations, therefore, include:

- Using containers in good condition. Wastes in leaking or damaged containers must be recontainerized.

- Ensuring the compatibility of the waste with the container (i.e., corrosive wastes should not be stored in metal containers).

- Handling containers properly to prevent ruptures and leaks.

- Preventing the mixture of incompatible wastes.

- Conducting inspections to assess container condition.

When closing a container storage area, the owner/operator must ensure that all hazardous waste residues (including contaminated soils) are removed.

Subpart J - Tanks

Tanks are stationary devices designed to contain an accumulation of hazardous waste and constructed primarily of non-earthen materials. Subpart J addresses tanks storing waste that are hazardous under Subtitle C of RCRA. Additional requirements have been developed for underground tanks storing petroleum or hazardous substances under Subtitle I of RCRA. General operating requirements fall into five basic areas:

1. Tank Assessment - An assessment must be completed to evaluate the tank system's structural integrity and compatibility with the wastes that it will hold. The assessment covers design standards, corrosion protection, tank tests, waste characteristics, and the age of the tank. Interim status tanks (in most cases) should have been assessed by the owner or operator by January 1988.

2. Secondary Containment and Release Detection - Unless the tank does not contain free liquids and is located in a building with impermeable floors, secondary containment and release detection is required. Secondary containment systems must be designed, installed, and operated to prevent the migration of liquid out of the tank system, and to detect and collect any releases that do occur. Arkansas has additionally specified that secondary containment areas must have an impermeable coating which extends above the level of any contained spill. Owners and operators of interim status tank systems can demonstrate that an alternate design, location, and operating practice will prevent the migration of hazardous wastes or constituents while the tank system is in use. Alternatively, the tank system can be exempted if any release that might occur would not harm human health and the environment.

3. Operating and Maintenance Requirements - Persons using tanks, either to store or treat wastes, must manage the tanks to avoid leaks, ruptures, spills, and corrosion. This includes using freeboard or a containment structure (e.g., dike or trench) to prevent and contain escaping wastes, and having a shut-off or bypass system installed to stop liquid from flowing into a leaking tank.

4. Response to Releases - Tanks with leaks or spills must be emptied immediately. The area surrounding the tank must be visually inspected for leaks and spills. Based on the inspection, further migration of the waste must be stopped, and visibly contaminated soils and surface water must be properly disposed. All major leaks must be reported to the Regional Administrator, followed by a report describing the fate of the released materials.

5. Closure and Post Closure - All contaminated soils and other hazardous waste residues must be removed from the tank storage area at the time of closure. If decontamination is impossible, the tank storage area must be closed following the requirements for landfills.

Subpart K - Surface Impoundments

A surface impoundment is a depression or diked area (e.g., pond, pit, or lagoon) used for storage, treatment, or disposal, with the following characteristics:

- Open on the surface
- Designed to hold an accumulation of waste in liquid or semi-solid form.

The use of surface impoundments for managing hazardous wastes has given rise to great concern because wastes deposited in them tend to escape. The pressure of the liquids forces the contents to flow downwards into surrounding areas, resulting in contamination, especially of subsurface waters. The initial requirements established for surface impoundments in interim status were not adequate to prevent contamination. They concentrated on general operating requirements to prevent overtopping (two feet of freeboard was required) and containment of liquids (dikes were required to have protective covers, such as grass or rock to preserve their structural integrity).

HSWA increased the level of leak protection required at surface impoundments. Existing surface impoundments in interim status had to retrofit and install double liners and a leachate collection system by November 8, 1988, or stop receiving, treating, or storing hazardous waste. Surface impoundments that come under Subtitle C regulation due to additional wastes being listed as hazardous have four years from the date the new wastes are added to meet the new requirements. Surface impoundments must be inspected once a week to determine whether there are any leaks. If a leak is found, the surface impoundment must be taken out of service until it is repaired.

The Hazardous Waste Management Act includes provisions for variances from minimum technological requirements, which under RCRA had to be granted by November of 1987. If any of the exempted impoundments are likely to leak or begin to leak, they must be retrofitted to meet the minimum requirements.

Subpart L - Waste Piles

An owner or operator of a waste pile, used for treatment or storage of a non-containerized accumulation of solid, non-flowing hazardous waste, is given a choice regarding management requirements. The owner or operator may comply with either the waste pile or the landfill requirements. Waste-piles used for disposal, however, must comply with the requirement for landfills. The requirements for managing storage and treatment waste piles include protecting the pile from wind dispersion. The pile must be placed on an impermeable base that is compatible with the waste being stored. If hazardous leachate or run-off is generated, control systems must be constructed, operated, and maintained.

Subpart M - Land Treatment

Land treatment is the process of using soils and microorganisms as a medium to biologically treat hazardous waste. Land treatment has been successfully used for many years in the petroleum refining industry. However, it is highly regulated because it presents potential risks in the absence of operational controls, (e.g., disposal of non-degradable waste types). These risks arise because land treatment involves the direct application of hazardous waste to soils.

An owner or operator may not place hazardous waste in or on a land treatment facility unless the waste can be made less hazardous or nonhazardous. Monitoring of the soil beneath the treatment area and comparison to data on background concentrations of constituents in untreated soils are required to detect migration of hazardous wastes. In addition, waste analyses must be conducted prior to placing wastes in or on the land to determine:

- If any substance in the waste is TC toxic

- The concentration of hazardous waste constituents

- The concentration of arsenic, cadmium, lead, and mercury, if food-chain crops are grown on the land.

If the waste contains any of these compounds in concentrations that will prevent its degradation, immobilization, or transformation, then the waste cannot be treated in a land treatment unit.

The requirements prohibit growing food-chain crops in a treated area containing arsenic, cadmium, lead, mercury, or other hazardous constituents. This prohibition may be waived if it is demonstrated that such elements or constituents would not be transferred to the food portion of the crop or, if transferred, would not occur in concentrations greater than would be expected in an identical crop grown on untreated soil in the same region. If food-chain crops are grown during post- closure they must be raised in accordance with the requirements established in the regulations.

The owner or operator must continue to monitor soil, maintain run-on and run-off management systems, and control wind dispersal after closure. In addition, access to the treatment unit must be restricted.

Subpart N - Landfills

Landfilling historically has been the cheapest, and thus preferred, means of disposing of hazardous waste. Through the 1980s, landfilling is expected to account for disposal of over one-fifth of all hazardous waste. Until the last decade, landfilling practices often focused only on burying the waste to get it out of sight, and controlling surface problems such as blowing litter. Experiences at Love Canal in New York and other burial operations have demonstrated the potential for severe human health and environmental impacts from improper landfilling.

Some argue that, because wastes remain hazardous for very long periods, they should not be landfilled at all. The Department agrees in principle that it is better to destroy or recycle hazardous wastes than to landfill them, but the fact remains that, for the foreseeable future, land disposal is necessary because it is technically infeasible at present to recycle, treat, or destroy all hazardous waste. A number of techniques are available, however, for reducing potential adverse health and environmental effects arising from landfills.

The problems that hazardous waste landfills have presented- and that interim status standards address - can be divided into two broad classes. The first class includes fires, explosions, production of toxic fumes, and similar problems resulting from the improper management of ignitable, reactive, and incompatible wastes. To deal with these problems, owners or operators are required to analyze their wastes to provide enough information for their proper management. They must control the mixing of incompatible wastes in landfill cells. Furthermore, they may landfill ignitable and reactive wastes only when the wastes are rendered unignitable or non-reactive.

The second class of problems presented by landfills concerns the contamination of surface and ground waters. To deal with these problems, interim status regulations require diversion of "run-on" (water flowing over the ground onto active portions of the facility) away from the active face of the landfill; treatment of any liquid wastes or semi-solid wastes so that they do not contain free liquids; proper closure (including a cover) and post-closure care to control erosion and the infiltration of rainfall; and crushing or shredding most landfilled containers so that they cannot later collapse thus leading to subsidence and opening of the cover. In addition, the interim status regulations for landfills require ground-water monitoring to detect contamination, and the collection of rainwater and other run-off from the active face of the landfill to control surface water pollution. Segregation of waste, such as acids, that would mobilize, solubilize, or dissolve other wastes or waste constituents is also required.

Following promulgation of the interim status regulations, Congress determined that existing requirements for land disposal (both interim and permitted), were inadequate to protect human health and the environment and adopted the position of discouraging land disposal. This stance is reflected in HSWA. Specifically, no bulk or non-containerized

liquid hazardous waste, or hazardous waste containing free liquids can be disposed of in either an interim status or permitted landfill. This is to prevent the formation of hazardous leachate that could migrate and cause surface or ground-water contamination. An exemption to the ban on disposing of nonhazardous liquid wastes may be obtained if the only reasonably available disposal method for such liquids is a landfill or unlined surface impoundment that may already contain hazardous wastes and that will not present a risk of contamination to underground sources of drinking water. Containers holding free liquids also can be placed in a landfill if the liquid has been solidified or decanted, or the container is very small, (e.g., an ampule). Finally, small containers in overpacked drums containing liquids (e.g., lab packs) may, if properly prepared, be placed in a landfill (with the exception of lab packs containing untreated land disposal restricted wastes). As with surface impoundments, expanded or replaced interim status landfills are required to install double liners and leachate collection systems.

Arkansas has adopted all elements of the RCRA and HSWA requirements for landfills, and has implemented more stringent requirements for the disposal of liquids in RCRA Subtitle C landfills; specifically prohibiting the landfilling of :

1. Bulk liquids, semisolids, and sludges, unless before disposal such waste has been treated or stabilized into cement-like material;

2. Containers holding free liquids unless all freestanding liquid has been removed or treated or stabilized into cement-like material; the material is very small, such as an ampule; or is contained in a lab pack as defined and is disposed of in accordance with the provisions of 40 CFR 264.316 or 265.316;

3. Municipal waste which is not hazardous waste; and

4. Ignitable wastes in containers, unless all free liquids therein have been removed or treated and stabilized into cement-like material.

Subpart O - Incinerators

Incineration, a method of thermal destruction of primarily organic hazardous waste using flame combustion, can reduce large volumes of waste materials to ash and less toxic gaseous emissions. The interim status incinerator general operating requirements include:

1) Achieving normal steady-state combustion conditions before wastes are introduced

2) Combustion and emission monitoring.

The owner or operator must analyze the waste that is to be incinerated. The waste analysis must determine:

1) Heating value of the waste

2) Total halogen and sulfur content

3) Concentrations of lead and mercury, unless the facility can demonstrate that these elements are not present in the waste stream to be incinerated. Interim status facilities burning dioxin-containing wastes must meet additional requirements. Essentially, these requirements amount to meeting the permitted (40 CFR Part 264, as incorporated in Regulation No. 23) incinerator standards. This includes destroying 99.9999% of the dioxins or acutely hazardous wastes in the waste stream.

When closing the incinerator, the owner or operator must remove all hazardous waste and waste residues (including but not limited to ash, scrubber waters, and scrubber sludges).

Subpart P - Thermal Treatment

Incineration is only one type of management process that can be used to thermally treat hazardous waste. Less conventional methods, such as molten salt combustion, calcination, wet air oxidation, and fluidized bed combustion, are regulated under this Subpart. Owners or operators who thermally treat hazardous wastes (other than incinerators) must operate the unit following many of the requirements applied to an incinerator. The difference is that the thermal treatment standards prohibit open burning of hazardous waste except for the detonation of waste explosives. Standards for thermal treatment at permitted facilities under 40 CFR Part 264 have been incorporated under Miscellaneous Units, Subpart X.

Subpart Q - Chemical, Physical, and Biological Treatment

Treatment, although most frequently conducted in tanks, surface impoundments, incinerators, and in land treatment facilities, can also be conducted in other ways through processes such as distillation, centrifugation, reverse osmosis, ion exchange, and filtration. Because there are many different types of treatment processes, and because the processes are frequently waste-specific, EPA has not developed detailed regulations for any particular type of process or equipment. Instead, general requirements have been established to assure safe containment of hazardous wastes. In most respects, these other treatment methods are very similar to using tanks for treatment; therefore, they are essentially regulated the same way. The requirements that must be met concern avoiding equipment or process failure (e.g., reagents or wastes that could cause equipment or a process to fail must not be used in treatment). In addition, safety systems to shut down waste inflow in case of a malfunction must be installed in continuous flow operations. Standards for chemical, physical, and biological treatment methods for permitted facilities under Part 264 have been incorporated under Miscellaneous Units, Subpart X.

Subpart R - Underground Injection

Underground injection is the disposal of fluids underground, through a well. Underground injection is regulated jointly under RCRA and the Safe Drinking Water Act. RCRA Section 3004(f) requires EPA to determine whether underground injection of hazardous wastes will endanger human health and the environment. In response to this requirement, EPA has banned the underground injection of wastes that do not meet the applicable treatment standards of the land disposal restrictions. More specific information on the wastes banned from injection can be found in 40 CFR Part 268.

Underground injection wells are permitted at the State level under the Safe Drinking Water Act and granted a permit-by-rule under RCRA. Owners and operators of these facilities must meet the general standards outlined in Subparts A through E of RCRA 40 CFR Part 264. They are not required to meet RCRA closure/post-closure or financial requirements (Subparts G and H of RCRA 40 CFR Part 264), since both areas are already regulated under the Safe Drinking Water Act (see 40 CFR P). HSWA prohibits the disposal of hazardous waste by underground injection into or above a formation within 1/4-mile of an underground source of drinking water.

The standards for underground injection of hazardous waste under the Safe Drinking Water Act consist of:

1. Construction Requirements - New wells must be sited so that they inject into a formation free of faults or fractures separate from underground sources of drinking water. Drilling logs and similar tests must be used to ensure that this requirement is met. Both new and existing wells must be cased and cemented to protect sources of drinking water.

2. Operating, Monitoring, and Reporting Requirements - The injection pressure of the well must not fracture the disposal formation. The owner or operator must monitor the injection well to ensure the integrity of the well bore. He or she must also periodically monitor the pressure, flow rate, and cumulative volume of the injected material.

Monitoring information is submitted annually to the Department.

Subpart W - Drip Pads

See the permitted facility standards below.

PERMIT (40 CFR PART 264) TECHNICAL REQUIREMENTS

The permitted standards are more extensive than the general management practices detailed in the interim status standards, because they compel the owners and operators of the different waste management methods to design their management units to prevent the release of hazardous waste. The permit standards in 40 CFR Part 264as incorporated in Regulation No. 23 also differ from the interim status standards in that they are only a blueprint for the requirements applied to TSDFs. The specific requirements with which an owner or operator must comply are developed for each facility by, permit writers, based on their "best engineering judgment" and the requirements of 40 CFR Part 264. Such requirements are thenmit. For example, the ground-water monitoring requirements are found in 40 CFR Part 264, but the actual parameters that must be monitored are specified in each permit. Thus, although the technical requirements for permits are discussed here, each facility's permit must be consulted for the individual requirements an owner or operator must follow.

The technical requirements for permitted facilities are structured similarly to the interim status technical requirements. They too are divided into two groups:

1) General standards

2) Specific standards.

Because many of the interim status technical requirements are the same or similar to permit requirements, the remainder of this chapter describes only these major provisions of Subparts I through O, and W through BB of 40 CFR Part 265 that are not found in, or differ from, Subparts I through BB of 40 CFR Part 264 as incorporated in Regulation No. 23.

PERMIT GENERAL STANDARDS

The general standards cover three areas:

1) Ground-water monitoring requirements (Subpart F)

2) Closure/post-closure requirements (Subpart G)

3) Financial requirements (Subpart H)

Subpart F - Ground-Water Protection

The ground-water monitoring requirements are discussed below. Closure/ post-closure and financial requirements for permitted facilities are similar to the corresponding requirements under interim status. Thus, they are not repeated here.

Detection Monitoring

The ground-water protection requirements for permitted facilities are more specific than those found under interim status. They apply to surface impoundments, waste piles, land treatment units, and landfills. There are three parts to the ground-water requirements: a detection monitoring program, a compliance monitoring program, and a corrective action program.

Detection monitoring is conducted to determine whether hazardous wastes are leaking from a TSDF at levels great enough to warrant compliance monitoring. Detection activities are similar to those outlined under interim status, including background monitoring and semi-annual monitoring for indicator parameters. Monitoring is conducted at a compliance point specified in the permit. This point is located at the edge of the waste management area, best envisioned as an imaginary plane on the outer limit of one or a group of disposal units. The indicator parameters and constituents that must be monitored are specified in the permit. If leakage is detected, then the owner or operator institutes a compliance monitoring program.

Compliance Monitoring

The objective of the compliance monitoring program is to evaluate the concentration of certain hazardous constituents in ground water to determine whether ground-water contamination is occurring at a level requiring corrective action. Each permit specifies the constituents and concentration limits owners or operators must monitor for in the ground-water protection standard. The constituents are selected from Appendix IX of Part 264 as those that could possibly originate from the TSDF. The ground-water protection standard can be:

1) Background levels

2) The values in Table 1 of 40 CFR Part 264, (Maximum Concentration of Constituents for Ground-water Protection), or

3) A site-specific Alternate Concentration Limit (ACL) approved by the Director.

If compliance monitoring indicates a statistically significant increase in the concentration limits for those hazardous constituents specified in the permit, then corrective action must be instituted to bring the facility back into compliance with the ground-water protection standard.

Corrective Action

Corrective action may be required either under the authority of Subpart F or the authority of HSWA. Subpart F corrective action applies only to cleaning up ground water at a regulated unit at a TSDF. This type of corrective action program is incorporated into a facility permit. HSWA corrective action (described in detail in Section III, Chapter 5) applies to releases to any media from any unit at a TSDF. These two corrective action authorities are often used in combination at a TSDF.

PERMIT SPECIFIC STANDARDS

The facility-specific standards cover the following waste management methods:

- Containers
- Tanks
- Surface impoundments
- Waste piles
- Land treatment units
- Landfills
- Incinerators

- Miscellaneous units.
- Drip pads
- Process vents

- Equipment leaks

Facility-specific permit standards for underground injection, thermal treatment, or chemical, physical, and biological treatment are developed from the general performance standards outlined in Subpart X, Miscellaneous Units, of 40 CFR Part 265 as incorporated in Regulation No. 23.

Subpart I - Containers

Permit requirements for containers are similar to the interim status requirements, with the following exceptions:

Containers must be placed in a containment system that is capable of containing leaks and spills. This system must have sufficient capacity to contain ten percent of the volume of all containers or the volume of the largest container, whichever is greater (this applies only to those holding liquids; containers holding solids are not factored into this volume determination).

When closing a container, all hazardous waste and hazardous waste residues must be removed, unless the container is to be disposed of as hazardous waste.

After closure, all contaminated equipment or soil must be decontaminated or removed.

Subpart J - Tanks

Permitted standards for tanks closely resemble the requirements for interim status tanks described previously. Tank assessments, secondary containment and leak detection, operations and maintenance, response to releases, and closure/post-closure requirements are all the same. The difference is that new tanks (regulated under 40 CFR Part 264) must comply with these requirements before being put into use. Requirements for existing (interim status) tanks are phased in. Additionally, owners and operators of permitted tank systems cannot obtain an exemption from the secondary containment and release detection requirements.

Subpart K - Surface Impoundments

Prior to HSWA, the permit standards for surface impoundments required that a liner be designed, constructed, and installed to prevent migration of wastes out of the impoundment. In addition, double-lined surface impoundments meeting certain requirements were not subject to ground-water protection requirements. However, HSWA established minimum technology standards for land disposal facilities, including surface impoundments, that are more stringent. Existing requirements were considered inadequate to prevent hazardous waste from entering the environment.

All surface impoundments are required to have at least one liner and to be located on an impermeable base. Additionally, new surface impoundments, replacements, or lateral expansions of surface impoundments applying for a permit after November 8, 1984, must meet the minimum technological requirements added to Section 3004(o) of RCRA by HSWA. These requirements are:

1) The installation of two or more liners

2) A leachate collection system between the liners

3) Ground-water monitoring.

Variances for these requirements may be given by the Director if the owner or operator demonstrates that alternative design and operation, together with location characteristics, will prevent migration of hazardous constituents into ground water. Monofill surface impoundments containing foundry wastes and meeting certain conditions also may be issued a waiver. HSWA deleted the variances from ground-water monitoring standards for double-lined impoundments.

In addition to the new HSWA minimum technology requirements, the old requirements calling for proper design, construction, and operation of surface impoundments still apply. These requirements include preventing liquids from escaping from the top (overfilling, run-on) or sides (dikes) of surface impoundments. Liners must be constructed properly, of appropriate materials and thickness. During construction and installation, liners and cover systems must be inspected for uniformity, damage, and imperfections. After installation all units must be examined weekly to ensure that the integrity of the unit is maintained and that no potentially hazardous situations have developed.

If the liquid in a surface impoundment suddenly drops for no apparent reason, or if a dike leaks, the surface impoundment must be removed from service and, if the leak cannot be stopped, the impoundment must be emptied.

The closure and post-closure requirements for surface impoundments include removing or decontaminating all waste residues, and properly covering and maintaining the impoundment to prevent leaks from occurring.

Subpart L - Waste Piles

Unlike waste piles regulated under interim status, permitted waste piles must have an impermeable base with a liner designed and constructed to prevent any migration of wastes out of the pile into adjacent soil or waters. A leachate collection system immediately above the liner also must be installed. Owners or operators can be exempted from this requirement if alternate design and operation practices, together with location characteristics, will prevent the migration of hazardous wastes.

Owners or operators of waste piles can obtain a waiver from ground-water protection regulations if the waste pile is "an engineered structure" that the Director finds does not receive or contain liquid waste, does exclude liquids, and has a multiple leak detection system that prevents waste migration.

Run-on and run-off systems must be constructed to prevent water from flowing onto the active portion of the waste pile. Construction of liners and cover systems must be monitored to ensure that they are properly installed. During operation, the owner or operator must inspect the waste pile once a week, to ensure that there is no deterioration and that the leachate collection system is functioning properly.

Subpart M - Land Treatment

These standards require that an owner or operator establish a land treatment program to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. The elements of this program specified in the permit, include:

- Which wastes can be treated
- Design and maintenance of the land treatment unit to maximize treatment
- Soil monitoring

- The hazardous constituents that must be degraded, transformed, or immobilized by treatment
- Size of the treatment zone.

The permit specifies the design and operating requirements that the owner and operator must use in the construction and maintenance of the land treatment unit.

Prior to the application of waste, a treatment demonstration must be conducted to verify that the hazardous constituents are adequately treated by the unit. The Director may allow the growth of food-chain crops in or on the treatment zone only if the owner or operator meets certain conditions outlined in 40 CFR 264.276.

The permitting standards for land treatment units include extensive unsaturated zone monitoring requirements. A monitoring program must be established to determine whether hazardous constituents are migrating out of the treatment zone. Based on a sampling program outlined in the permit, if migration is detected a permit modification must be submitted outlining changes in operating practices to maximize the success of treatment.

Subpart N - Landfills

Landfills, like surface impoundments, are regulated closely because of the potential impacts they may have on human health and the environment. HSWA added several provisions that owners or operators of landfills must meet. Landfills (including expansions or replacements) permitted after November 1985, must install two or more liners, two leachate collection systems (one above and one between liners) and must conduct ground-water monitoring. The variance from ground-water requirements is the same as that described under surface impoundments and waste piles - only engineered structures that exclude liquids and prevent liquid migration may be exempted. Owners and operators are exempted if they can show that alternative design and operating practices, together with location characteristics, will prevent the migration of hazardous waste. Landfills containing foundry wastes that meet certain location and design criteria are also exempt. Facilities permitted prior to November 1985 must only install one liner and a leachate collection system.

Another HSWA amendment affecting landfills is the "liquids in landfills restriction." Bulk or non-containerized liquids (both hazardous and nonhazardous) are prohibited from placement in a landfill. In addition, the land disposal of containerized liquid hazardous waste or free liquids in containerized hazardous waste must be minimized. If the only reasonable alternative for disposing of nonhazardous liquids is a non Subtitle C landfill or unlined impoundment that contains or may contain hazardous waste, then the Regional Administrator may allow its disposal in a landfill. As with surface impoundments, HSWA requires that final permit applications for landfills be accompanied by information on the potential for public exposure to hazardous wastes or constituents from facility releases. This was previously discussed under 40 CFR P surface impoundment requirements.

Subpart O - Incinerators

By either conducting a trial burn or using alternate data, an owner or operator must determine the operating methods for his or her incinerator that will result in its meeting the following performance standards:

1) 99.99% of each principal organic hazardous constituent specified in the permit must be destroyed or removed by the incinerator (dioxins and acutely hazardous wastes must meet 99.9999% destruction).

2) Hydrogen chloride emissions must be minimized

3) Particulate emissions must be limited.

The permit will specify the composition of waste feed that may be incinerated. Different waste feeds may be incinerated only if a new permit or permit modification is obtained. To prove that an incinerator can meet the required performance standards, a trial burn is usually conducted. Trial burns are a temporary period in which the owner or operator demonstrates the efficiency of the incinerator in destroying hazardous wastes. While incinerating hazardous waste, the combustion process and equipment must be monitored and inspected to avoid potential accidents or incomplete combustion. Incinerators may receive waste only after the destruction removal efficiency has been achieved and the unit is complying with its operating requirements. The Director may ask for a sampling of the waste and exhaust emissions to verify that the operating requirements in the permit are being met.

Subpart W - Drip Pads

The requirements of this Subpart apply to facilities that use new or existing drip pads to convey treated wood drippage, precipitation, and/or surface water run-on to an associated collection system. Existing drip pads are those constructed before December 6, 1990 and those for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 6, 1990. All other drip pads are new drip pads.

For each existing drip pad as defined in 40 CFR 264.570, the owner or operator must evaluate the drip pad and determine that it meets all of the requirements of Subpart W, except the requirements for liners and leak detection systems of 264.573(b). No later than the effective date of this rule, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified Arkansas-registered professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and re-certified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all of the standards of 264.573 are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating standards of § 264.573, except the standards for liners and leak detection systems, and must document the age of the drip pad to the extent possible, to document compliance with paragraph (b) of that section.

For immediate protection of the environment, all existing drip pads, regardless of age, must have an impermeable coating or cover in place not later than September 30, 1995. In addition, the owner or operator must develop a written plan for the eventual upgrading, repairing, and modifying of the drip pad to meet the requirements of 264.573(b) within 15 years from the effective date of this rule, and submit the plan to the Director no later than 2 years before the date that all ultimate (15 year) drip pad repairs, upgrades, and modifications will begin. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of 264.573 and must document the age of the drip pad to the extent possible. The plan must be reviewed and certified by an independent qualified Arkansas-registered professional engineer. Detailed construction plans and specifications and construction quality assurance plans to accomplish the provisions of the written plan required above must be submitted to the Director six (6) months prior to any construction or upgrades (including the impermeable coating). Compatibility information for the impermeable coating application or cover and procedures for drip pad surface preparation must also be provided to ADPC&E with the construction documents. These submittal requirements apply to the impermeable coating and upgrades to existing pads, as well as to new pads.

A properly installed and maintained drip pad coating which is installed to meet the September 30, 1995 deadline should satisfy the eventual coating option.

For existing drip pads of known and documentable age, all upgrades, repairs, and modifications must be completed within two years of the effective date of this rule, or when the drip pad has reached 15 years of age, whichever comes later.

For existing drip pads for which the age cannot be documented, within 8 years of the effective date of this rule, but if the age of the facility is greater than 7 years, all upgrades, repairs and modifications must be completed by the time the facility reaches 15 years of age or by two years after the effective date of this rule, whichever comes later.

If the owner or operator believes that the drip pad will continue to meet all of the requirements of 264.573 after the date upon which all upgrades, repairs and modifications must be completed as established, the owner or operator may petition the Director for an extension of the deadline specified. The Director will grant the petition for extension based on a finding that the drip pad meets all of the requirements of 264.573, except for those for liners and leak detection systems, and that it will continue to be protective of human health and the environment.

Subpart X - Miscellaneous Units

Although EPA has issued and the Department has adopted regulations for all major waste management technologies, some gaps remain. Some technologies are difficult to fit into the framework of the prior regulations. To address these gaps, EPA and the Department have issued regulations governing miscellaneous units.

Miscellaneous units are defined as any unit used to treat, store, or dispose of hazardous waste that is not a research, development, and demonstration unit, or not already regulated under 40 CFR Part 264 (e.g.,a landfill, surface impoundment, incinerator, or tank). Miscellaneous units regulated under Subpart X include, but are not limited to:

- Open burning/open detonation areas
- Thermal treatment units
- Deactivated missile silos
- Geologic repositories

Requirements for miscellaneous units are based on technical performance standards. They must be designed, constructed, operated, and maintained in a manner that ensures protection of human health and the environment. Requirements for each miscellaneous unit are determined on a case-by-case basis, including any of the technical requirements under 40 CFR Part 265 that may be appropriate.

Arkansas has enacted more stringent requirements for open burning/open detonation units under Subpart X. Open burning or detonation on unprotected ground surfaces is prohibited. OB/OD operations must be conducted on or in a containment device which is elevated above ground level, and which must be sufficiently impermeable so as to prevent the leaching or migration of waste residues into the soil beneath or around the containment device. The device must be designed and constructed so as to provide protection against stormwater or other run-on or run-off.

After September 21, 1993, open burning of hazardous wastes is prohibited when alternate technologies are available and feasible. Applicants for a permit for open burning or open detonation of hazardous wastes must prove that no reasonable alternative to open burning or detonation exists prior to the approval of such a permit.

LAND DISPOSAL RESTRICTIONS

HSWA Section 3004 includes restrictive provisions governing the land disposal of untreated hazardous wastes. These provisions are being codified into regulations following a schedule specified in the statute, which outlines a phase-in of the land disposal restrictions by groups. HSWA required EPA to develop treatment standards stipulating concentrations or levels of hazardous constituents that are considered to be protective of human health and the environment for all listed and characteristic hazardous wastes by May of 1990 (with a few exceptions).

Treatment standard concentrations are expressed either as: (1) concentrations of hazardous constituents in leachate produce from testing a sample of the waste using the TCLP (toxicity characteristic leaching procedure - a toxicity test) (2) concentrations of hazardous constituents present in the waste in weight percent (e.g., 2% lead). In addition to treatment standards expressed as concentrations, for a few wastes these standards are actually specified as a particular treatment technology (e.g., halogenated organic compounds - incineration).

HSWA has divided the universe of listed and characteristic wastes into five groups and set schedules for EPA to develop treatment standards for these groups. The groups and schedules are:

1) Solvents and Dioxins: These were banned from land disposal (unless treated) effective November 8, 1986 and November 8, 1988 respectively.

2) "California List" Wastes: This group of hazardous wastes was originally developed by the State of California for their hazardous waste management program. It includes: wastes containing certain metals, free cyanides, polychlorinated biphenyls, corrosives (pH less than 2.0) and certain wastes containing halogenated organic compounds. In addition, hazardous wastes containing halogenated organic compounds are also included in this group. The majority of these wastes was banned from land disposal (unless treated) effective July 8, 1987. Some wastes were given variances due to a lack of national treatment capacity.

3) "First, Second, and Third Third" Wastes: The remaining list of listed and characteristic wastes was divided into thirds (see 40 CFR Part 268 for specific waste groupings). The "first third"wastes were banned effective August 8, 1988 and the "second third" June 8, 1989. The "third third" wastes were banned effective May 8, 1990.

4) Newly Listed Wastes: Additional wastes listed after November 8, 1984 will be evaluated on a case-by-case basis. EPA must make a determination of whetherbe the waste may be land-disposed within six months of the identification or listing. However, HSWA does not impose an automatic prohibition on land disposal if EPA misses a deadline for a newly listed waste.

Treatment, Storage, and Disposal Facility Requirements

Specific land disposal restrictions requirements for TSDFs include:

1) Ensuring compliance with generator record-keeping requirements when residues generated from treating restricted wastes are manifested off site, and

2) Certifying that treatment standards have been achieved for particular wastes prior to disposal.

Facilities that generate land disposal restricted wastes need to ensure that the proper paperwork accompanies the manifest when restricted wastes are sent off-site fordisposal. Facilities that store or treat restricted wastes orrestricted waste residues, and send the residues off-site for disposal, are subject to the same record-keeping regulations as generators. In addition, facilities that treat restricted wastes to the appropriate standard may send a certification with the manifest to the disposer verifying compliance. However, most disposal facilities generally test waste shipments to ascertain compliance with the treatment standards and to prepare their own certification.

Restricted wastes may be disposed in a hazardous waste landfill only if the waste meets the applicable treatment standard. In some cases, a hazardous waste may meet the treatment standard as generated and require no further treatment. However, more frequently, waste streams will require some type of treatment (e.g., incineration, fixation) prior to disposal to comply with the standards. Facilities that dispose of restricted wastes are ultimately responsible for determining and certifying that they meet the standards. A certification must be prepared by the disposal facility for each distinct waste volume disposed unless the certification is provided by the generator or treatment facility (as discussed above).

REQUIREMENTS FOR RECYCLABLE MATERIALS AND RECYCLING PROCEDURES

Certain materials that are hazardous in nature or exhibit a hazardous waste characteristic are exempt from the scope

of hazardous waste regulation when recycled (40 CFR 261.6), including:

- Reclaimed industrial ethyl alcohol
- Used batteries returned to the manufacturer for regeneration
- Used oil recycled but not burned
- Scrap metal
- Fuels from oil-bearing hazardous waste
- Oil reclaimed from hazardous waste
- Coke and coal tar from the iron and steel industry.

Consequently, handlers of these materials are not subject to generator, transporter, or TSDF regulations.

Similarly, regulations contained in 40 CFR Part 266 exempt specialized recycling processes from portions of the hazardous waste regulations. These processes include:

- Hazardous wastes and waste-derived products used in a manner constituting disposal
- Spent lead-acid batteries which are reclaimed, and
- Hazardous wastes from which precious metals are reclaimed.

In addition, units used to recycle hazardous wastes (e.g., stills that distill spent solvents) do not require a hazardous waste permit. However, owners or operators of recycling facilities would have to obtain permits for container or tank storage areas used to store the wastes prior to recycling (with the exception of facilities reclaiming lead-acid batteries and those engaged in precious metal recovery).

Subpart H - Hazardous Waste Burned in Boilers and Industrial Furnaces

Arkansas has adopted and incorporated by reference the federal rules at 40 CFR 266, Subpart H, which expands environmental controls on hazardous waste combustion and regulates air emissions from the burning of hazardous waste in boilers and industrial furnaces. Emissions of toxic organic compounds, toxic metals, hydrogen chloride, chlorine gas, and particulate matter are regulated. Owners and operators of boilers and industrial furnaces are subject to the general hazardous waste facility standards applicable to other hazardous waste reatment, storage, and disposal facilitities. Hazardous waste storage units at regulated burner facilities are subject to 40 CFR Part 264 permit standards. Halogen acid furnaces are defined as industrial furnaces. Arkansas has additionally adopted and incorporated by reference various amendments and technical corrections to the BIF rule up to and including those promulgated prior to June 30, 1992.

PERMITTING

Permits are issued to hazardous waste treatment, storage, and disposal facilities and transporters. Permit guidelines and procedures, which include an appellate review process, have been developed and implemented. No permit shall be issued by the Department for a term greater than 10 years. Thus far, ADPC&E has adopted, by reference, EPA's regulations which were enacted through June 30, 1992. ADPC&E has established procedures to accept as interim provisions of Regulation No. 23 all amendments and other changes to Federal Regulations prior to hearings held to adopt such changes.

ADPC&E has adopted, by reference, EPA regulations found in Parts 260-266, 268, 270, and 124 of Title 40 of the Code of Federal Regulations as well as adopting several additional, more stringent regulations which meet the specific needs of the State. Federal regulations not adopted by reference are included as equivalent standards in

Regulation No. 23 (Hazardous Waste Management) .

Adequate Enforcement, Notice, and Hearing in the Permit Process:

A compliance monitoring program and an enforcement program have been developed. Inspections are an integral element of the State's compliance monitoring program.

A public comment policy, adopted July 24, 1981, establishes procedures for receiving public comment and protocol at hearings and commission meetings.

The State program provides for public participation at numerous decision-making points. Specific public hearing requirements pertain to the hazardous waste program. The State program requires that the applicant for a hazardous waste management facility publish a notice of permit application in the newspaper having the largest circulation in the county where the facility is planned.

The Department shall give 45 days notice of a hearing on such application; and the hearing shall be held in the county where the facility is proposed.

During the forty-five-day period between publication of the Department's notice and the hearing date, a copy of the draft permit will be available to the public at the Department and at a public facility (library or school, for example) in the area of the state where the facility is planned.

Consultation and submission of material on program topics by the public can be freely exercised by any citizen during the review process. The Department staff will consider all comments and re-evaluate program or permit elements as issues arise.

Another provision of Regulation No. 23 (Hazardous Waste Management) allows the Department director to hold a preliminary hearing on a proposed waste facility in the affected area. This is a discretionary power and should be exercised prior to the full-scale public hearing with the forty-five-day notice.

Permitting - General

Owners or operators of facilities that treat, store, or dispose of hazardous waste must obtain an operating permit under Subtitle C. TSDFs in existence on November 19, 1980 operate under interim status until a final permit decision is made. New TSDFs are ineligible for interim status and must receive a RCRA permit before construction can commence. Only in a very limited number of circumstances can a person treat, store, or dispose of hazardous waste without a permit:

- Generators storing waste on site for less than 90 days
- Small quantity generators who store waste on site less than 180 days
- Farmers disposing of their own (hazardous) pesticides on site
- Owners or operators of totally enclosed treatment facilities, wastewater treatment units (tanks) and elementary neutralization units
- Transporters storing manifested wastes at a transfer facility for less than 10 days
- Persons engaged in containment activities during an immediate response to an emergency
- Owners or operators of solid waste disposal facilities handling only conditionally exempt small quantity

generator waste

• Persons engaged in Superfund on-site cleanups and RCRA Section 7003 cleanups.

If any of the individuals listed above treat, store, or dispose of hazardous waste in a manner not covered by the exclusion, they are subject to the RCRA/HSWA permit requirements for that activity.

As noted earlier, a permit defines a facility's requirements under RCRA and the Arkansas Hazardous Waste Management Act. These requirements consist of all the general and technical standards listed in 40 CFR Part 264 and Regulation No. 23, as well as any requirements for corrective action. Corrective action requirements specify that TSDFs clean up releases caused by facility operations.

TYPES OF HAZARDOUS WASTE PERMITS

Several categories of permits are issued under the RCRA Subtitle C program. Each category defines operating requirements and various provisions specific to the permitting need.

1. *Treatment, Storage, and Disposal Permits* - Most commonly, RCRA permits are issued for treatment, storage, and disposal units. The units are: containers, tank systems, surface impoundments, waste piles, land treatment units, landfills, incinerators, boliers and industrial furnaces, wood preserving units, and miscellaneous units. These methods are the most common way to treat, store, and dispose of hazardous waste. Minimum national standards have been promulgated for each of these methods at 40 CFR Part 264. HSWA added "corrective action" requirements to the permitting process. These requirements state that facilities must address existing or part releases. Interim status facilities or facilities permitted prior to HSWA must revise their permit to comply with these requirements. All permit conditions must be met prior to issuance of a permit, with the exception of corrective action requirements. Corrective action requirements can be met in one of two ways, by:

- writing it as a permit condition, or

- developing a schedule of compliance.

2. *Research, Development, and Demonstration Permits* - EPA and the Department encourage the use of alternative treatment technologies by issuing research, development, and demonstration (RD&D) permits for promising innovative and experimental treatment technologies. The permitting criteria are that national standards must not exist for the treatment technology. For example, a high temperature incinerator could not apply for an RD&D permit since standards have already been promulgated at 40 CFR Part 264 Subpart O. Permits are issued for one year, although they may be renewed up to three times. RD&D facilities can receive only those wastes that are necessary to determine the efficacy of the treatment technology.

Issuance of RD&D permits follows a more streamlined process than a standard RCRA permit. The Department may modify or waive the usual permit application and issuance requirements, with the exception of financial responsibility and public participation, as long as the Department maintains consistency with its mandate to protect human health and the environment.

3. *Post-Closure Permits* - Land disposal facilities that leave wastes in place when they close must obtain a post closure permit, specifying the requirements for proper post-closure care.

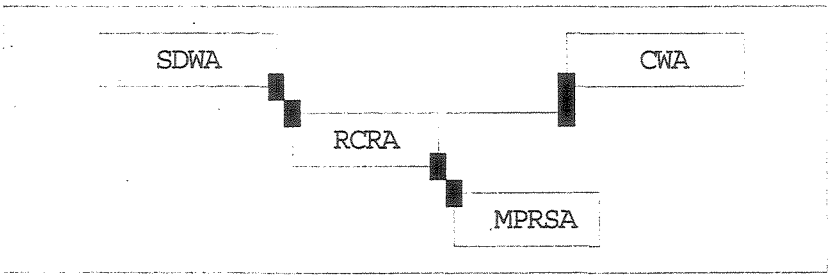
4. *Emergency Permits* - In potentially dangerous situations, ADPC&E can forego the normal permitting process. Specifically, when there is an "imminent and substantial endangerment to human health and the environment," a temporary (90 days or less) emergency permit can be issued to a:

• Non-permitted facility for the treatment, storage, or disposal of hazardous waste

• Permitted facility for the treatment, storage, or disposal of hazardous waste not covered by its existing permit.

5. *Permit-by-Rule* - The Department may issue permits under a number of different laws. In some instances, the requirements of one statute's permitting regulations are quite similar to those in RCRA and the Hazardous Waste Management Act. To avoid duplication, The Department has tried to abbreviate the application process for facilities that need to be permitted under two or more statutes. This is done through a permit-by-rule. A permit-by-rule eliminates the need for facilities to submit a full Subtitle C permit application when they are permitted under the following federal law:

- Safe Drinking Water Act (Underground Injection Control permit)
- Clean Water Act (National Pollutant Discharge Elimination System permit)
- Marine Protection, Research, and Sanctuaries Act (Ocean Dumping permit).



Facilities seeking a RCRA permit that already have one of the three permits listed above need only meet a subset of the Subtitle C regulatory requirements. For example, an owner or operator of a barge or vessel that has an ocean dumping permit, and complies with the appropriate conditions under Subtitle C (e.g., obtaining an EPA ID number, using the manifest system, and biennial reporting) will be considered to have a permit under RCRA.

6. *Trial Burn and Land Treatment Demonstration Permits* - ADPC&E issues permits to construct and operate new hazardous waste management facilities. Such facilities cannot be constructed until a permit is issued. There is, however, an exception to this rule. Land treatment facilities and incinerators must go through a trial period during which their ability to perform properly under operating conditions is tested. This period is called a trial burn for incinerators and a land treatment demonstration for land treatment facilities. Owners or operators of these two types of facilities are required to obtain temporary permits that are enforced while the facility is being tested. Once the facility adequately completes its test, the Agency can make decisions regarding the final permit. This sets the final operating conditions based on the data generated from these demonstrations.

THE PERMIT PROCESS

All hazardous waste TSDFs required to get a RCRA permit follow the same basic permitting process. The exceptions are facilities that are issued a permit-by-rule or an emergency permit. The permit process consists of the following steps:

1. Submitting a permit application
2. Reviewing the permit application
3. Preparing the draft permit

4. Taking public comment

5. Finalizing the permit

An additional step of appealing the permit decision may occur with some permits.

There are a number of Federal laws that may affect the permit process, including the:

° Wild and Scenic Rivers Act

° National Historic Preservation Act of 1966

° Endangered Species Act

° Coastal Zone Management Act

° Fish and Wildlife Coordination Act.

When any of these laws is applicable, its procedures must be followed. For example, the Coastal Zone Management Act prohibits EPA or the Department from issuing a permit for an activity affecting land or water use in the coastal zone unless the proposed activity complies with the State's Coastal Zone Management Program, and is agreed to by the State. To get more information on these laws and their potential impacts on Subtitle C's permitting process, see 40 CFR 270.3.

Permitting Procedures:

Permitting procedures for the Hazardous Waste Division are patterned after the procedures contained in 40 CFR Part 270. The complete permit application for a hazardous waste management (RCRA) facility includes both Parts A and B as defined in 40 CFR 270.13, 270.14-270.29, and Regulation No. 23.

Part A consists of EPA Forms 1 and 3 of the consolidated Permit Application Forms and accompanying information as described in 40 CFR 270.13. There is no prepared application form for Part B; however, information required to be submitted in Part B is described in detail in 40 CFR 270.14 through 270.29. The respective facility standards are found in 40 CFR Part 264. Additional requirements and standards for both commercial and non-commercial facilities, as defined in Regulation No. 23, are found in §§ 5, 10, and 12 through 15 of Regulation No. 23. Because of the nature of their operation, commercial hazardous waste management facilities must meet several more stringent permitting standards than corres-ponding non-commercial facilities.

HSWA imposed a statutory timetable for Part B submittals for interim status facilities, summarized below. Those facilities that fail to meet the submittal deadline lose their interim status and must close if they do not receive permits by the deadline. However, these deadlines do not apply to new facilities or facilities that gained interim status after November 8, 1984.

Type of Facility	Loses/Lost Interim Status on	Unless Part B Submitted by
Land disposal	Nov. 8, 1985	Nov. 8, 1985

Incinerator	Nov. 8, 1989	Nov. 8, 1986
All others	Nov. 8, 1992	Nov. 8, 1988

Under the provisions of HSWA, another group of facilities can submit Parts A and B separately. Specifically, any TSDF that comes under the jurisdiction of Subtitle C due to statutory or regulatory changes must submit its Part A six months after the date of publication of the regulations in the *Federal Register*, or 30 days after the date they first become subject to the promulgated standards. The Part B for such facilities can either be voluntarily submitted or called in by the Department. A special timetable applies to land disposal facilities that come under the jurisdiction of Subtitle C in this manner: they must submit a Part B within 12 months of becoming subject to Subtitle C requirements or lose interim status.

Incinerators and all other facilities will retain interim status until a final permit determination is made if they submit their Part B applications by the indicated deadlines.

New facilities submit Parts A and B, simultaneously. This submission must be made at least 180 days prior to the date on which physical construction is expected to start. RCRA Section 3019 requires that final permit applications for surface impoundments and landfills be accompanied by information on the potential for public exposure to hazardous wastes or constituents from facility releases. Once the information is submitted, the Department makes it available to the Agency for Toxic Substances and Disease Registry (ATSDR). Additionally, If the Department believes that the release poses a substantial risk to human health, the Department may require that the facility perform a health assessment. The exposure information must at least address:

- Reasonably foreseeable potential releases from both normal operations and accidents at the facility,including releases associated with transportation to or from the facility,

- The potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described above, and

- The potential magnitude and nature of the human exposure resulting from the releases described above.

In some cases information contained in the permit application may be considered confidential by the owner or operator. Permit applicants often make a claim of confidentiality to protect trade secrets. In such cases, the owner or operator must make the claim known at the time of submission by following the procedures described in Section 6 of Regulation No.23. Claims of confidentiality are reviewed (by the Department's legal counsel) to determine if the information can legitimately be claimed as confidential. If a claim is substantiated, the information is treated as confidential and not released. If, on the other hand, a claim is denied, the information can be made public.

Once the owner or operator is informed, by letter, that his application is complete, an in-depth evaluation of the permit application begins. The purpose of this evaluation is to determine if the application satisfies the technical requirements of RCRA. After the permit application is evaluated, ADPC&E makes a tentative decision either to issue or deny the permit. If the tentative decision is to deny the permit, the Department must send the owner or operator a notice of intent to deny. If the Department tentatively decides to issue the permit, a draft permit is prepared by the Hazardous Waste Division staff.

ADPC&E must either approve or deny the applications for facilities that received interim status on or before November 8, 1984 in accordance with the following schedule set out under HSWA:

- Land disposal facilities - by November 8, 1988

- Incinerators - by November 8, 1989
- All other TSDFs - by November 8, 1992.

For new facilities that submit their applications after November 8, 1984, HSWA places no time limits on how long the Department can take to evaluate the application.

Prior to final technical review of a permit application, the application must be deemed to be complete. In order to facilitate this review, it is required that all applications for permits include both Part A and B, as described above, and any supplemental information required by Regulation No. 23 (unless the Part A has been previously submitted or updated for Interim Status and is unchanged). If changes have been made or are proposed to be made in the operation of the facility, then a revised Part A must be submitted as part of the permit application. Additionally, the permit application fee required by Section 11 of Regulation No. 23 must accompany the permit application.

Two public notices are required for all new permitting actions (excluding permit transfers and minor modifications of existing permits): 1) when the application is determined to be administratively complete and 2) when the draft permit if complete or the application is denied. The term "New permit" applies to the process for obtaining a permit for a proposed facility, a transportation permit, or a permit which will create additional impact to the environment. "Administratively complete" is achieved when the Division determines that enough information has been provided in order to process the permit.

Notice upon Application

When the Division determines the application is administratively (not technically) complete, the Division shall prepare and send the actual notice for publication to the applicant and shall direct the applicant to cause such notice to be published in the newspaper. Any interested party desiring a public hearing on an application for a permit must make a request to the Department within ten (10) days of the date of publication of the notice of application. Whether to have a hearing is within the Department's discretion. If a hearing is to be held, all commenters, as well as the applicant, must be notified of the hearing by certified mail. The public hearing is of record but is not adjudicatory in nature. The Department will receive public comments at any time, though it need only respond to comments received during a designated comment period. The only mandatory public comment period will be after public notice of the draft permit.

Permit Application Review

The Department's hazardous waste permits staff review each application for the completeness of information submitted, including the permit fee. Upon completion of this review, the applicant is notified if any additional information is required.

When all information is present, and the required application fee is paid, the reviewing engineer conducts a detailed technical review of the application. During this portion of the application review, the reviewing engineer evaluates the basic application components (e.g. waste analysis plan, contingency plan, detailed engineering plans and specifications, etc) as well as the HSWA corrective action components (RFA, SWMU identification, exposure assessment, etc). Additional information is requested from the facility as necessary to fully determine the technical standards of the facility operations.

Upon completion, the engineer prepares a draft permit (or notice of intent to deny) which is then forwarded to the Technical Branch Manager for comment. This draft permit contains general permit conditions, general facility conditions, specific waste management conditions, special conditions, and corrective action conditions. The draft permit includes corrective action language requiring investigation of any known or potential releases of hazardous substances and, if necessary, an evaluation of corrective action alternatives and implementation of remedial (or

interim) measures.

Preparing the Draft Permit

The draft permit incorporates applicable technical requirements and other conditions pertaining to the facility's operation. These other conditions are divided into two groups - those applicable to all permits (called general conditions) and those applied on a case-by-case basis. General permit conditions comprise:

- A requirement to comply with all conditions listed in the permit
- A responsibility to notify ADPC&E of any planned alterations or additions to the facility
- A requirement to provide the Department with any relevant information requested and to allow Department representatives to inspect the facility premises under certain conditions
- A requirement to certify annually that a program is in place to reduce the volume and toxicity of waste, and that the proposed method of treatment, storage, and disposal minimizes threats to human health and the environment
- A duty to submit required reports (e.g., Unmanifested Waste Report, Annual Report, and Manifest Discrepancy Report).

The case-by-case permit conditions include:

- Compliance Schedules - These schedules are used to bring a facility into compliance with corrective action requirements.
- Duration of Permit - The permit is valid for up to ten years; land disposal permits must be reviewed every five years
- A requirement to implement HSWA or RATFA corrective actions as appropriate.

Public Notice of Draft Permit

When the draft permit is complete or the Division has determined to deny the application, the Division shall cause notice to be published in the newspaper. This notice starts the formal forty-five (45)-day public comment period. The Division must receive proof of publication for all required public notices from the applicant and payment of applicable permit fees before the final permit is issued.

Following approval by the Technical Branch Manager, a public notice is issued announcing the draft permit and setting a forty-five (45) day public comment period. For initial permits, major modifications, or if significant public interest is forthcoming, the Director schedules a public hearing to receive comments from the public as provided in Regulation No. 23, Section 12(c). The draft permit and any supporting documentation is made available for public scrutiny at one or more of the many depositories throughout the state offices in Little Rock, Arkansas, as well as convenient points (city hall, county courthouse, and public libraries) in the neighborhood of the proposed facility.

Upon completion of the 45-day period for public comment, including a hearing, if one is held, the permit is finalized and submitted to the Hazardous Waste Division Chief for final permit action, i.e., issuance or denial. Any appeal to the permit decision can be made to the Commission on Pollution Control and Ecology in accordance with the provisions of Regulation No. 8 and Arkansas Code, Annotated, Sections 8-1-101, *et seq.*, 8-3-101, *et seq*, the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended), Ark. Code Ann. 8-4-101 *et seq*, and

8-5-101, *et seq.*.

In order to minimize confusion among permittees and applicants for permits due to overlapping and/or duplicative regulatory requirements, and to promote a smooth transition from federal to state control of hazardous waste management in the state, Arkansas elected to adopt, by reference, in Section 3 of Regulation No. 23, applicable federal regulations as promulgated in 40 CFR 270, 124, 260 - 266, and 268. In those few instances where the State has more stringent requirements, the specific federal regulation was excluded from adoption and so indicated in Section 3 of Regulation No. 23. Consequently, specific permitting procedures and requirements contained in 40 CFR Part 270, including any "unique" permitting procedures, are currently in effect in Arkansas, and are described in detail in the following federal regulations:

SUBJECT	REGULATORY CITATION
Transfer of Permit	270.40
Major Modifications or Revocation and Re-issuance of Permits	270.41
Minor Modifications of Permits	270.42
Termination by Rule	270.32
Permits by Rule	270.60
Emergency Permits	270.61
Hazardous Waste Incinerator Permits	270.62
Permits for Land Treatment Demonstrations using Field Tests or Laboratory Analyses	270.63
Qualifying for Interim Status	270.70
Operation During Interim Status	270.71
Changes During Interim Status	270.72
Termination of Interim status	270.73

The enclosed flow charts depict the major procedural steps followed from the time of permit application to final permit action, accompanied by a brief description of each step in the process.

The State uses Part B application completeness checklists provided by EPA, as well as the Part A and Part B Supplemental Checklists which incorporate more stringent requirements of Regulation No. 23 (Hazardous Waste Management) . These checklists are provided to the applicant for use in preparing a complete permit application.

Facility checklists used by the Department in reviewing permit applications are enclosed as enclosures to this revised program description.

Appeals to State permitting decisions can be made pursuant to Parts III, VIII, and IX of ADPC&E Regulation No. 8, dated July 6, 1984, which is enclosed in its entirety at TAB H of Addendum 2 to the HSWA Cluster I/II and Non-HSWA Cluster IV revision application, submitted on January 24, 1991.

Joint Permitting Procedures

ADPC&E and EPA have agreed to a joint permitting process for the processing and enforcement of permits for those provisions of HSWA for which ADPC&E does not have authorization. As ADPC&E receives authorization for additional provisions of the HSWA, EPA will suspend issuance and enforcement of Federal permits in Arkansas for those provisions, and will transfer that portion of permit responsibility to ADPC&E.

Whenever EPA adds permitting standards for processes not currently covered by federal regulations, EPA Region VI processes and enforces the portions of RCRA permits in Arkansas pertaining to these new areas until ADPC&E receives final authorization to enforce these changes. At the time the State program is approved in the new areas, EPA suspends issuance of federal permits in the state. EPA will then transfer any pending permit applications,

completed permits, or pertinent file information to ADPC&E within thirty days of the approval of the State program in conformance with the conditions of the RCRA MOA.

EPA Overview of State Permits

While EPA may comment on any permit application or draft permit, EPA's overview function focuses primarily on specific facilities identified by ADPC&E and EPA in ADPC&E's Multi-Year Permitting Strategy and the annual state grant work program.

EPA may comment in writing on any draft permit or proposed permit modification, whether or not EPA commented on the permit application, within forty-five days of its receipt. Where EPA indicates in a comment that issuance, modification, reissuance, termination, or denial of the permit would be inconsistent with the approved state program, EPA must include in its comments:

1) A statement of the reasons for the comment (including the section of the State law or regulation that supports the comment), and

2) The recommended actions that should be taken by ADPC&E in order to address the comment (including the conditions which the permit would include if it were issued by EPA).

EPA is required to send a copy of its written comments to the permit applicant.

EPA shall withdraw these comments when satisfied that ADPC&E has met or refuted its concerns, and must also provide the permit applicant with a copy of such withdrawal.

Where the EPA and ADPC&E staffs cannot reach resolution or agreement on draft permits, the Director of ADPC&E confers with the Regional Administrator and both then direct their respective staff to coordinate as necessary and to efficiently discuss and consider all comments and concerns and to resolve all misunder-standings. Any remaining conflicts are then settled by the mutual decision of the Director and the Regional Administrator.

Under Section 3008(a)(3) of RCRA, EPA may terminate a State-issued permit in accordance with the procedures of 40 CFR Part 124, Subpart E, or bring an enforcement action in accordance with the procedures of 40 CFR Part 22 in the case of a violation of a State program requirement. In exercising these authorities, EPA must observe the conditions established at 40 CFR 271.19(e).

ADPC&E's Role in Joint Permitting

ADPC&E is responsible for expeditiously drafting, circulating for public review and comment, issuing, modifying, reissuing, and terminating RCRA permits for those hazardous waste treatment, storage, and disposal facility permit provisions contained in the federally authorized portions of ADPC&E's program. ADPC&E does so in a manner consistent with RCRA as amended by HSWA, the State/EPA Region VI Memorandum of Agreement, all applicable federal requirements, and this Program Description.

ADPC&E issues, modifies, and reissues all permits contained in the authorized portions of ADPC&E's program in accordance with the Arkansas Hazardous Waste Management Act and Code and includes as permit conditions all applicable provisions of such statutes and regulations. In the exercise of its statutory variance authority (A.C.A. 8-7-211) ADPC&E shall not grant any variances that will result in any requirements less stringent than comparable federal statutory or regulatory requirements. Any compliance schedules contained in permits issued by ADPC&E will require compliance with applicable standards as soon as possible.

ADPC&E considers all comments EPA makes on permit applications and draft permits. ADPC&E will satisfy or

refute in writing EPA's concerns on a particular permit application, proposed permit modification, or draft permit before issuing the permit or making the modification.

The Joint Permitting Process

Pursuant to section 3006(g)(1), and in accordance with the Hazardous and Solid Waste Amendments of 1984, EPA has authority to issue or deny permits or those portions of permits to facilities in Arkansas for the requirements and prohibitions in or stemming from HSWA until ADPC&E's program is amended to reflect those requirements and prohibitions and authorization is received for the portion or portions of the program.

EPA and ADPC&E established a joint permitting process for the issuance of RCRA permits in Arkansas. This joint permitting process is established in accordance with section 3006(c)(3) of RCRA. Details of the joint permitting process are provided in the annual State grant work plan. The duties and responsibilities of EPA and ADPC&E for joint permitting are also specified in the Joint Permittng Agreement established and updated as a part of the annual State grant work program.

The details of the joint permitting process as contained in ADPC&E's grant work program are reviewed and revised as often as necessary, but not less often than annually so as to assure its continued appropriateness.

Upon authorization of ADPC&E for any of the provisions of HSWA, the specifics of the Joint Permitting Agreement as set forth in the annual state grant work program are amended so as to reflect the necessary changes due to authorization. An amendment to the RCRA MOA or the execution of a separate memorandum of agreement may be required for authorization of any of the provisions of HSWA.

Administration of Joint Permits

EPA's Role: EPA administers the RCRA permits or portions of permits it has issued to facilities in the State until they expire or are terminated. EPA is responsible for enforcing the terms and conditions of the Federal permits while they remain in force. When ADPC&E either incorporates the terms and conditions of the Federal permits in State RCRA permits or issues State RCRA permits to these facilities, EPA will terminate those permits subject to the terms of the Enforcement Memorandum of Understanding.

ADPC&E's Role: ADPC&E agreed to and has reviewed all hazardous waste permits which were issued under State law prior to the effective date of the RCRA MOA and will modify, or revoke and reissue such permits as are necessary to require compliance with the amended state program, the Arkansas Hazardous Waste Management Act, Code, and Regulation No. 8. ADPC&E agrees to modify or revoke and reissue these State permits as RCRA permits, as necessary, in accordance with the annual State grant workplan, the Joint Permitting Agreement, and the RCRA Memorandum of Agreement.

PERMIT ADMINISTRATION

Once issued, RCRA permits are valid for up to ten years. Land disposal permits have an additional requirement of being reviewed after five years. During the term of a permit situations may arise which may cause the permit to be modified, revoked and reissued, or terminated.

Permit Modification

Permits may need modification for a number of reasons, including:

- Substantial alterations or additions to the facility

- New information about the facility becomes available

- New statutory or regulatory requirements affect existing permitted activities.

In September 1988, EPA published regulations (under 40 CFR 270.41 and 270.42) that revised permit modification procedures for changes that facility owners and operators may want to make. EPA categorized selected permit modifications into three classes and established administrative procedures for approving modifications in each class. ADPC&E has adopted these revised requirements.

The permit modification regulations provide owners and operators more flexibility to change permit conditions, expand public notification and participation opportunities, and allow for expedited approval if no public concern exists for a proposed modification.

The classes are defined as:

Class 1: Routine changes and correction of errors

Class 2: Common or frequently occurring changes needed to maintain a facility's capability to manage wastes safely or conform to new requirements

Class 3: Major changes that substantially alter the facility or its operations.

In addition to establishing permit modification classes and administrative procedures, this regulation also gives the Department the authority to grant temporary authorization for facilities to respond promptly to changing conditions.

Revocation and Reissuance of the Permit

ADPC&E may revoke and reissue a permit in two circumstances:

- When cause exists for terminating the permit (under the circumstances described below), but the Department decides that revocation and reissuance is a more appropriate step

- When the permit holder plans to transfer the permit.

Permit Termination

In some instances, operators may not comply with the requirements stipulated in the permit, even after enforcement action. In this case it may be necessary to terminate a hazardous waste permit. EPA may terminate a permit or deny its renewal for three reasons:

1) Noncompliance by the permittee with any condition of the permit

2) Failure on the part of the permittee to disclose any relevant information during the permit process or misrepresentation of facts at any time

3) The permitted activity endangers human health and the environment and can only be regulated to acceptable levels by permit termination.

A facility whose permit is terminated must implement its closure plan as required under 40 CFR Part 264 Subpart G. If wastes remain on site, post-closure monitoring must also be done.

DISCLOSURE REQUIREMENTS

Recent legislation has passed (Act 454 of 1991) which authorizes the Department to deny any permit application, transfer of permit, or operating authorization if an applicant has a history of noncompliance with the environmental laws and regulations of Arkansas or any other jurisdiction, or if any person affiliated with the applicant has a history of such noncompliance. The Department requires all applicants for a new RCRA treatment, storage, or disposal permit for a hazardous waste management facility or a hazardous waste transporter permit to submit a disclosure statement with their permit application. The submission of the disclosure statement is mandatory; no application can be considered complete without it. The disclosure statement shall be an original, written statement by the applicant which contains:

(1) The full name, business address, and social security number of the applicant and all affiliated persons;

(2) The full name and business address of any legal entity in which the applicant holds a debt or equity interest of five percent (5%) or more, or which is a parent company or subsidiary of the applicant, and a description of the ongoing organizational relationships as they may impact the applicant's operations in Arkansas;

(3) A description of the experience and credentials of the applicant, including any past or present permits, licenses, certifications, or operational authorizations relating to environmental regulation;

(4) A listing and explanation of any civil or criminal enforcement actions by governmental agencies involving environmental protection laws against the applicant or any affiliated person within the ten years immediately preceding the filing of the application, to include administrative enforcement actions or consent orders resulting in the imposition of sanctions, permit or license revocations or denials issued by any state or federal authority, any actions that have resulted in a finding or a settlement of a violation, and any similar action pending;

(5) A listing of any federal environmental agency and any other environmental enforcement agency that has or has had regulatory responsibility over the applicant; and

(6) Any other additional information the Director may require which relates to the competency, reliability, or responsibility of the applicant and any affiliated person.

(7) If the applicant is a publicly held company required to file periodic reports under the Securities and Exchange Act of 1934, or a wholly-owned subsidiary of a publicly-held company, he may submit, in lieu of a disclosure statement, a copy of the most recent annual and quarterly reports required by the Securities and Exchange Commission. The applicant shall also submit any other information required by the Director which relates to the competency, reliability, or responsibility of the applicant and any affiliated person.

THE CORRECTIVE ACTION PROCESS

In HSWA, Congress expanded EPA's authorities (beyond those contained in 40 CFR Part 264 Subpart F) to address releases of hazardous waste through corrective action. The new authorities allow EPA to address releases to ground water and all other environmental media at all solid waste management units at TSDFs. Corrective action requirements are imposed through a permit or an enforcement order. The TSDF owner or operator is responsible for complying with these requirements. Permits issued to RCRA facilities must, at a minimum, contain schedules of compliance to address releases and include provisions for financial assurance to cover the cost of implementing the corrective measures.

Arkansas has adopted 40 CFR Parts 264.100 and 264.101 by reference in Regulation No. 23. State provisions and requirements for corrective action are broader in scope than Federal requirements. In addition to the federal authority

incorporated from 40 CFR Parts 264.100 and 264.101, ADPC&E may require corrective action under State authority pursuant to the Remedial Action Trust Fund Act (RATFA)(Act 479 of 1985, as amended, A.C.A. 8-7-501 et. seq.).

Corrective action under state authority pursuant to RATFA is not limited to listed RCRA hazardous wastes, but applies to all "hazardous substances" as defined by RATFA, e.g.:

> "as of March 21, 1985, any substance designated pursuant to Section 311(b)(2)(A) of the Federal Water Pollution Control Act (Public Law 92-500); any element, compound, mixture, solution, or substance designated pursuant to Section 102 of Title I of the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Public Law 96-510); any hazardous waste, including polychlorinated biphenyls (PCB's), as defined by the Arkansas Hazardous Waste Management Act, as amended, Section 8-7-201 et seq., and the regulations promulgated thereunder; any toxic pollutant listed under Section 307(a) of the Federal Water Pollution Control Act; any hazardous air pollutant listed under Section 112 of the federal Clean Air Act; and any hazardous chemical substance or mixture regulated under Section 7 of the federal Toxic Substances Control Act, and any other substance or pollutant designated by regulations of the Commission promulgated under this subchapter."

(Remedial Action Trust Fund Act, A.C.A. 8-7-503(8))

RATFA additionally authorizes the implementation of any corrective or remedial action measures necessary to investigate, control, prevent, abate, treat, or contain any releases or threatened releases of hazardous substances from a site or facility, without regard to the actual facility boundary. Implementation of these corrective and remedial actions may be directed by means of an administrative or judicial order, or as a condition of permitting.

Arkansas's HSWA authorization, at 56 FR 57595, includes authorization for on-site contamination requiring corrective action (RCRA Revision Checklist 17L), permit applications requiring corrective action (RCRA §3004, Revision Checklist 44A), corrective action beyond the facility boundaries (RCRA §3004(v), Revision Checklist 44B), and corrective action for injection wells (RCRA §3004(u), Revision Checklist 44C).

Scope of Corrective Action

To better understand the scope of the corrective action requirements, one must understand its key terms.

1. *Solid waste management units (SWMUs)* are waste management units from which hazardous wastes or constituents may migrate, even if the unit was not intended for the management of hazardous waste. Additionally, any areas that become contaminated as a result of routine and systematic releases of wastes are SWMUs (e.g., spill areas).

2) *Regulated units* are a subset of all SWMUs. A regulated unit is any surface impoundment, waste pile, land treatment unit, or landfill that received waste after July 26, 1982.

3) *Hazardous constituents* are any substances listed in 40 CFR Part 261, Appendix VIII.

The scope of the corrective action process for regulated units at permitted facilities can vary somewhat from that required at other solid waste management units at permitted or interim status facilities. Releases to ground water from regulated units are addressed under 40 CFR Part 264, Subpart F. RCRA Sections 3004(u) and (v) of RCRA (codified in 40 CFR 264.101) require corrective action for releases of hazardous wastes or constituents from any SWMU at a TSDF that is seeking or subject to a RCRA permit. The Arkansas Remedial Action Trust Fund Act authorizes the Department to impose corrective action requirements for releases that have migrated beyond the facility boundary, and further authorizes ADPC&E to require corrective action or other necessary measures through an enforcement order, whenever there is or has been a release of hazardous waste or constituents from a RCRA facility.

ADPC&E can require permitted facilities with releases from regulated units to:

1) Take corrective action only on those releases to the uppermost aquifer (under 40 CFR Part 264 Subpart F), or

2) Clean up any other contaminated media (under Sections 3004(u) and (v) of RCRA and RATFA).

The decision is made by the Department on a case-by-case basis, taking into account the nature and magnitude of the release.

CORRECTIVE ACTION COMPONENTS

The corrective action process has four main components. Each component comprises a number of steps. The number of steps required and the complexity of corrective action permit conditions or other enforcement actions may vary depending on the extent and severity of releases of hazardous waste at a TSDF. The decision on which steps to include is made on a facility-by-facility basis. ADPC&E may also require that facilities take interim corrective measures whenever necessary to protect human health and the environment.

RCRA Facility Assessment (RFA)

Release determinations for all environmental media from SWMUs (i.e., soil, ground water, subsurface gas, air, or surface water) will be made by the regulatory agency primarily through the RCRA Facility Assessment (RFA) process. The Department performs an RFA for each facility seeking a RCRA permit to determine if there are continuing releases of concern. The major objectives of the RFA are to:

- Identify SWMUs and collect existing information on contaminant releases, and
- Identify releases or suspected releases needing further investigation.

The RFA begins with a preliminary but fairly comprehensive review of pertinent existing information on the facility. If necessary, the review is followed by a visual site inspection to verify information obtained in the preliminary review and to gather information needed to develop a sampling plan. A sampling visit is subsequently performed, if necessary, to obtain appropriate samples for making release determinations.

The findings of the RFA will result in one or more of the following actions:

- No further action under the RCRA corrective action program is required at this time, since no evidence of a release(s) or of a suspected release(s) was identified
- A RCRA Facility Inspection (RFI) by the facility owner or operator is required where the information collected indicates a release(s) or suspected release(s) warrants further investigation
- Interim corrective measures by the owner or operator are required where the regulatory agency believes that expedited action should be taken to protect human health or the environment
- In cases where problems associated with permitted releases are found, the regulatory agency will refer such releases to the appropriate permitting authorities.

RCRA Facility Investigation (RFI)

If the Department determines that a RFI is necessary, this investigation will be required of the owner or operator either under a permit schedule of compliance or under an enforcement order. ADPC&E will apply the appropriate regulatory authority and develop specific conditions in permits or enforcement orders. These conditions will generally

be based on results of the RFA and will identify specific units or releases needing further investigation. Such permits or orders may be accompanied by a supporting fact sheet. The RFI can range widely from a small specific activity to a complex multimedia study. In any case, through these conditions, the regulatory agency will direct the owner or operator to investigate releases of concern. The investigation may initially involve verification of a suspected release. If confirmed, further characterization of such releases will he necessary.

The RFI step also includes interpretation by the regulatory agency of release characterization data against established health and environmental criteria to determine whether a Corrective Measures Study (CMS) is necessary. This evaluation is crucial to the corrective action process. The regulatory agency will ensure that data and information collected during the RFI adequately describe the release, and can be used to make decisions regarding the need for a CMS with a high degree of confidence.

Identifying and implementing interim corrective measures may also be conducted during the RFI. If, in the process of conducting the investigation, a threat or exposure to hazardous constituents is identified, interim corrective measures may he required. Both the owner or operator and the regulatory agency have a continuing responsibility to identify and respond to emergency situations and to define priority situations that warrant interim corrective measures.

Corrective Measures Study (CMS)

If the potential need for corrective measures is identified during the RFI process, the owner or operator is then responsible for performing a Corrective Measures Study (CMS). During this step of the corrective action process, the owner or operator will identify and recommend as appropriate, specific measures that will correct the release.

Information generated during the RFI will be used not only to determine the potential need for corrective measures, but also to aid in the selection and implementation of these measures. While conducting the RFI, the owner or operator is encouraged to collect data (e.g., engineering data such as soil compaction properties or aquifer pumping tests), which may be needed to select and implement corrective measures.

Corrective Measures Implementation (CMI)

Corrective measures implementation includes designing, constructing operating, maintaining, and monitoring selected corrective measures if the remedy is not properly implemented, ADPC&E will direct the facility to take additional action on a site-specific basis.

HSWA requires that facilities demonstrate financial assurance for corrective action prior to implementation. This ensures that facilities have the necessary funds available to carry out cleanup of the site. EPA has proposed regulations to require financial assurance for corrective action. Under the proposed rule, acceptable financial mechanisms include trust funds, surety bonds, letters of credit, financial tests, and corporate guarantees. Until finalized, the proposed rule is used as guidance to implement the statutory requirement for financial assurance for corrective action.

RCRA CORRECTIVE ACTION VS. RATFA RESPONSE

The Arkansas Remedial Action Trust Fund Act (RATFA) authorizes ADPC&E to require corrective action (under an enforcement order or as part of a permit) whenever there is, or has been, a release of hazardous waste or constituents. The statute provides similar corrective action authority in response to releases at interim status facilities. Further, RATFA allows PC&E to require corrective action beyond the facility boundary. PC&E interprets the term "corrective action" to cover the full range of p.ossible actions, from studies and interim measures to full cleanups. Anyone who violates the corrective action order can be fined up to $25,000 per day of noncompliance and runs the risk of having interim status suspended or revoked.

On the whole, the RATFA response authority has a broader reach than RCRA's corrective action. The RCRA provisions apply only to RCRA-regulated facilities. RATFA, on the other hand, can be utilized to require response work by any potentially responsible party (PRP) at any place where there is a release or potential release. Moreover, the RATFA response authorities go beyond requiring responsible parties to perform cleanup work. Under RATFA, governmental and private parties who are not PRPs can perform such work and receive Fund financing. the Department can then seek reimbursement, penalties, or damages up to triple the cost of the cleanup from PRPs. Additionally, where RCRA corrective action is restricted to only listed and characteristic hazardous wastes, the Department's corrective action authority under RATFA applies to the full scope of hazardous substances, including petroleum and petroleum-based products.

IMMINENT HAZARDS UNDER RCRA AND RATFA

Both RATFA and the Hazardous Waste Management Act contain provisions that allow APC&E to require persons contributing to an imminent hazard to take the necessary actions to clean up releases. Under A.C.A. § 8-7-508, PC&E has the authority to abate an imminent or substantial danger to public health or the environment that results from a hazardous substance release. In an enforcement action, the RATFA and RCRA program imminent hazard provisions may be used in tandem to strengthen the government's case.

PERMIT APPEALS

Certificate of Service on Final Permits

Act 163 of 1993 provides that a thirty (30)-day appeal period begin "after service of notice" for permittees, while it begins "after the date of the Department's final decision" for third parties. In order to resolve this conflict, each final permit decision that is issued by the Department shall contain language that make it the Department's final decision.

Service of notice is complete when the permit decision is mailed. The following language must be provided as the last paragraph of each permit:

> "The Department decision To issue Permit No. ___, to modify Permit No. xx, to revoke Permit No. xx, or to deny this permit application is final for purposes of appeal as of the date indicated in the Certificate of Service below."

In addition, the following Certificate of Service must be placed at the end of each final permit:

> "I, (Person mailing the final permit), hereby certify that a copy of this permit or denial of permit, permit modification, etc.] has been mailed by first-class mail to (Permittee or applicant], address, on or before this (Day of Month, Year)."

Party Preclusion and Issue Preclusion.
All appeals must be filed within thirty days of service of the permit decision (i.e. thirty days after the decision is mailed as explained in subsection Cal above). However, only interested persons (other than the applicant) who submitted comments on the record during the comment period shall have standing to file an appeal. Written comments submitted prior or subsequent to the public comment period or telephone calls will not suffice to provide standing to appeal. Further, only the particular issues raised in the comments submitted by a party (other than the applicant) can be raised on appeal, unless the party can show good cause why it was not raised. The appeal must include a "complete and detailed statement identifying the legal and factual objections to the permit action". A petition without specific legal and factual objections will no longer be acceptable.

Preliminary Hearing

Within thirty (30) days after the appeal is filed with the Commission Secretary, a preliminary hearing shall be held

by the hearing officer. At this hearing, the hearing officer shall decide which parties, if any, have standing (party preclusion) and which issues, if any, are properly appealed (issue preclusion). The recommended decision of the hearing officer on these matters will be heard by the Commission at its next regularly scheduled meeting.

The hearing officer will also schedule the hearing and other matters such as discovery deadlines (i.e., for depositions or interrogatories) in order to submit the hearing officer's decision in the matter for final Commission action within 120 days after the preliminary hearing. This 120-day limit may be extended by mutual agreement of the parties or by the hearing officer for just cause.

Stays

After a permit appeal is filed and before the Commission makes its final determination, a permit denial shall stand, but permit issuance, modification, or revocation shall be stayed. Nevertheless, a stay may be granted or terminated by the Commission upon application by any party to avoid substantial prejudice.

Permit Transfers

The permittee or transferee must submit a written request for transfer of the permit on a short form prepared by the Department. The new permittee/transferee must provide the Department with a completed "bad actor" disclosure statement pursuant to A.C.A. § 8-1-106. The Department's thirty-day review period does not begin until these documents have been received. The transfer of the permit is automatically granted thirty days after the submission of these documents unless the Director determines that the transferee is a "bad actor" as defined at A.C.A. § 8-1-106, or decides to terminate and reissue the permit as provided at 40 CFR 270.40, as incorporated by reference in Regulation No. 23.

Moratoria on Permits

The Director can no longer declare a moratorium on the issuance of a particular type of permit. This power is now reserved for the Commission through the rulemaking process.

ENFORCEMENT

The effective implementation of RCRA's regulatory programs rests on whether or not the people and companies regulated under the Act comply with its various requirements. The goals of the RCRA enforcement program are to ensure that the regulatory and statutory provisions of RCRA are met, and to compel necessary corrective action. This requires close monitoring of hazardous waste handler (generator, transporter and TSDF) activities and expeditious legal action where non-compliance is detected. Facility inspections by Federal and State officials are the primary tool for monitoring compliance. When non-compliance is detected, legal action may follow. This may include the use of administrative orders, civil lawsuits, or criminal lawsuits depending on the nature and severity of the problem. The combination of effective monitoring and expeditious legal action is intended to reduce the number of handlers not operating in compliance with RCRA's requirements and to deter potential violations by imposing penalties

State Compliance, Monitoring, and Enforcement Program:

An effective and efficient compliance monitoring and enforcement program is critical to the success of the State's Hazardous Waste Program. The compliance and monitoring system as outlined in this section is designed to

assess and monitor compliance with facility standard and generator and transporter requirements equivalent to:

- 40 CFR 262, "Standards Applicable to Generators of Hazardous Waste".

- 40 CFR 263, "Standards Applicable to Transporters".

- 40 CFR 264 and 265, "Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities", "Standards Applicable to Existing Facilities with Interim Status", and any additional standards imposed by Acts 406, 1098, and the State Hazardous Waste Code.

- 40 CFR 266, "Standards for the Management of Specific Hazardous Waste and Specific Types of Hazardous Waste Management Facilities".

- 40 CFR 268, "Land Disposal Restrictions".

- 40 CFR 270, "Administered Permit Programs: The Hazardous Waste Permit Program."

The Hazardous Waste, Technical Services and Legal Divisions of the Department are responsible for the numerous activities associated with compliance monitoring and enforcement.

ADPC&E has the primary responsibility under the State program to inspect and bring enforcement action against any hazardous waste generator, transporter, or facility in Arkansas. Without limiting in any manner EPA's ability to inspect or enforce, the two agencies have agreed that EPA will inspect or enforce in three situations: 1) when for policy reasons unrelated to the ability or willingness of ADPC&E to inspect or enforce in a timely manner, EPA desires to inspect or enforce; 2) when in EPA's judgement ADPC&E fails to take timely and appropriate enforcement action, or fails to timely and properly inspect; and 3) upon request by ADPC&E.

In reference to the first category above, the frequency of EPA oversight and training inspections will be specified in the annual State work program. Normally, EPA will accompany ADPC&E on no more than 10% of ADPC&E's compliance inspections. Inspections and enforcement actions under this category shall not reflect or constitute evidence of any inability or unwillingness on the part of ADPC&E.

In reference to the second category above, when in EPA's judgement ADPC&E fails to take timely and appropriate enforcement action, or fails to timely and properly inspect: before conducting an inspection of a generator, transporter, or facility, the Regional Administrator will give the Director not less than fifteen days' notice of the intent to inspect in accordance with 40 CFR 271.8(b)(3)(i). If ADPC&E performs a compliance inspection and submits a report and data relevant thereto within that time to EPA, no EPA inspection will be made, unless the Regional Administrator deems the ADPC&E report and data to be inadequate. In the event the Regional Administrator deems the report and data inadequate, the Regional Administrator will provide to the Director a written statement of the deficiencies upon which such a determination is based. The statement of deficiencies will be provided within fifteen days following a determination of inadequacy. In case of an imminent hazard to human health or the environment, the Regional Administrator may shorten or waive the notice period. EPA enforcement in regard to this category shall then be initiated in accordance with the criteria set forth in the Enforcement MOU.

EPA may take enforcement action against any person determined to be in violation of RCRA in accordance with section 3008(a)(2). EPA will take enforcement action upon determining that ADPC&E has not taken timely and appropriate enforcement action or upon request by ADPC&E. Prior to issuing a compliance order under section 3008(a) EPA will give notice to ADPC&E. EPA also retains its rights to issue orders and bring actions under sections 3008(h), 3013 and 7003 of RCRA and any other applicable Federal statute.

EPA may not take action under section 3008 of RCRA against a holder of a State-issued permit on the grounds

that the permittee is not complying with a condition necessary to implement approved State program requirements, unless the Regional Administrator stated, in commenting on the permit application or draft permit, that the condition was necessary following the procedures set forth at 40 CFR 271.19(b) and Section V.B of this Agreement. EPA may, however, take action under section 3008 of RCRA against a holder of a State-issued permit on the grounds that the permittee is not complying with a condition that the Regional Administrator, in commenting on that permit application or draft permit, stated was necessary to implement approved State program requirements, whether or not that condition was included in the final permit.

ADPC&E agrees to carry out a timely and effective program for monitoring compliance by generators, transporters, and facilities as defined in the State/ EPA Enforcement Memorandum of Understanding and annual State grant work program against all persons in violation of generator and transporter standards (including manifest requirements), facility standards,permit requirements, compliance schedules, and all other program requirements, including violations detected by State or Federal compliance inspections. As part of this program, ADPC&E will conduct inspections to assess compliance with generator and transporter standards (including manifest requirements), facility standards, permit requirements, compliance schedules, and all other program requirements. Compliance monitoring activities and priorities will be specified in the annual State grant work program and shall be consistent with all applicable Federal requirements and with ADPC&E's Program Description. ADPC&E will maintain procedures for receiving and ensuring proper consideration or information about violations submitted by the public.

In assessing civil penalties under Section 9 of ADPC&E Regulation No. 7, the Department will apply the factors therein set forth in the manner provided by 40 CFR 271.16(c).

ADPC&E retains all records for at least three years unless there is an enforcement action pending. In that case all records will be retained until such action is resolved. EPA also agrees to retain all records for at least three years.

Frequency of Inspections

Frequencies of compliance evaluation inspections (CEI's) and comprehensive groundwater monitoring evaluations (CME's) are in accordance with EPA's annual Operating Year Guidance and RCRA Implementation Plan, and is coordinated via the annual state grant workplan.

The inspectable universe is defined as all facilities active in RCRIS, and is coordinated between ADPC&E and EPA Region VI annually.

Currently, all permitted, operating, and closed land disposal facilities with outstanding Class I violations, closed LDFs not inspected during the previous year, incinerators, federally-owned TSDFs, and industrial boilers and furnaces are inspected annually. Commercial land disposal and treatment, storage, or disposal facilities are inspected twice annually. All commercial land disposal facilities subject to groundwater monitoring receive a comprehensive monitoring evaluation each year, noncommercial facilities every three years. Seven percent (increasing to 8% in FY 92) of all generators, including small quantity generators, are inspected each year. An active program is established and maintained to respond to citizen complaints, identify violators and nonnotifiers, and bring them into compliance.

COMPLIANCE MONITORING

The first phase of the enforcement program is monitoring facilities to verify that they comply with RCRA's regulatory requirements. This monitoring serves several purposes. It allows EPA and authorized States to find out which facilities are not in compliance. It also allows EPA and the States to assess the effectiveness of specific legal actions, such as administrative orders, that may have been taken against a handler. Also, the overall

compliance monitoring program allows EPA to evaluate the effectiveness of State programs and to monitor nationwide compliance with RCRA. Finally, monitoring acts as a deterrent, encouraging compliance with the regulations by making non-compliers susceptible to enforcement actions.

Inspections

The primary method of collecting compliance monitoring data is through an inspection. The inspection may include a formal visit to the handler, a review of records, taking of samples, or observation of operations. In addition to supplying information for enforcement proceedings, inspections are used to gather data to assist EPA in the development of RCRA regulations, and to help EPA track program progress and accomplishments.

Inspectors from the Hazardous Waste Division's Enforcement Branch conduct the inspections. In instances where criminal activity is suspected, the Arkansas State Police or EPA's National Enforcement Investigations Center (NEIC) may become involved. Similarly, the Arkansas Highway Police and the Department of Transportation (DOT) may participate where waste transporters are involved.

The Hazardous Waste Management Act provides the authority for conducting inspections. This Act allows ADPC&E inspectors to enter any premises where hazardous waste is handled to examine records and take samples of the wastes.

HSWA requires that all Federal or State operated facilities be inspected annually. Furthermore, all TSDFs must be inspected at least once every two years. Facilities also may be inspected at any time if EPA or the State has reason to suspect that a violation has occurred. Finally, facilities are chosen for an inspection when specific information is needed to support the development of RCRA regulations.

Types of Inspections

A number of different types of inspections are conducted under the authority of the RCRA program. Inspections may be conducted by EPA, an authorized State, or both. Typically, either the State or EPA will assume overall responsibility, or the lead, for conducting the inspection. The different inspection types are explained below.

1. Compliance Evaluation Inspection (CEI) - These are routine inspections of hazardous waste generators, transporters, and TSDFs to evaluate compliance with the requirements of RCRA. CEIs encompass a file review prior to the site visit, an on-site examination of generation, treatment, storage or disposal areas, a review of records, and an evaluation of the facility's compliance with the requirements of RCRA.

2. Case Development Inspection (CDI) - CDIs are conducted when significant RCRA violations are known, suspected, or revealed. A case development inspection is performed to gather data in support of a specific enforcement action. Most of the activities conducted during a CDI are specific to the type of information required to document the violation (e.g., incinerator investigations, closure/post-closure investigations).

3. Comprehensive Ground-Water Monitoring Evaluations (CME) - The CME is conducted to ensure that ground-water monitoring systems are designed and function properly at RCRA land disposal facilities. In addition to the CEI activities, CMEs include sampling and analysis of the facility's ground-water monitoring system and hydrogeological conditions.

4. Compliance Sampling Inspection (CSI) - These are inspections in which samples are collected for laboratory analysis. A sampling inspection may be conducted with a CEI, or any inspection except a CDI.

5. Operations and Maintenance Inspection (O&M) - Many land disposal facilities close with waste in place. The purpose of O&M inspections is to ensure that ground-water monitoring and other systems continue to function properly after a land disposal facility has closed. O&M inspections are usually conducted at facilities that have already received a thorough evaluation of the ground-water monitoring system under a CME inspection.

Conducting the Inspection

Inspections conducted pursuant to a citizen complaint are conducted on a no-notice basis. Scheduled inspections are conducted on a no-notice or short notice basis so as to more closely ascertain the day-to-day operations of a facility. All inspections and investigations are conducted in a courteous and professional manner. Prior to conducting an inspection and/or an investigation the inspector familiarizes himself with the facility to be visited. This is done by reviewing all pertinent file regarding the facility. These include the Department Central files, working files maintained by the Legal Division and the Technical and Enforcement branches, and the Division's manifest and annual report files. Pertinent information is recorded on a Pre-Inspection Worksheet, which the inspector maintains in his possession for reference during the site visit.

During the site visit, the inspector makes a visual inspection of the hazardous waste generation and waste management locations. He also visually inspects the process area and grounds surrounding the manufacturing building(s) and waste management area(s). The purpose of this "walk-through" is to verify:

1) Physical compliance with waste management requirements.

2) Proper and accurate identification, labeling, and handling of all hazardous wastes generated or handled.

3) Approximate volume of wastes generated and/or handled.

During the course of a CEI, ADPC&E inspectors examine all hazardous waste management processes and waste streams which apply at that specific facility. Inspection checklists are used to insure thorough coverage of each inspected area.

The inspector also reviews all permanent records and plans required to be kept at the facility. If the inspector feels that a more detailed review is warranted than can be conducted at the site, he may make copies of selected items for later review.

The inspector follows proper safety and personal protection procedures throughout the site visit, including any site-specific precautions which may be required by the facility.

Upon request by the facility, the inspector will conduct an exit briefing to inform the facility staff of the preliminary findings of the inspection. It is stressed that the results at this time are preliminary and that a thorough review of the information gathered will be conducted, and the results documented and transmitted to the facility in writing at a later date.

All notes taken during the course of an inspection or investigation are recorded in a bound field notebook with sequentially numbered pages. These field notes are the basis for writing the resulting report, therefore entries must be dated, legible, and accurate, and contain only facts or observations. Notes must be of sufficient detail to recreate the events at the facility during the writing of the report or subsequent legal testimony, if necessary. The notebook is also used to document photographs and samples taken during the inspection. The notebook is kept in the physical possession of the inspector or in a secure location at all times.

Photographs taken during inspections, as well as the analytical results of samples taken, are included in the inspection report. Negatives of photographs are filed separately in Division files, and are retained for at least three years (unless there is ongoing enforcement action against the facility, in which case negatives are retained for 3 years following final resolution of the enforcement case).

Procedures for sampling during inspections and investigations are documented in the *Quality Assurance Plan For Hazardous Waste*, which is updated annually in accordance with the State's RCRA grant workplan. Additional sampling procedures as well as analytical techniques are detailed in EPA publication SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.*

Post-inspection activities include review of all field notes, photographs, sample results, and any other evidence gathered during the site visit. The inspector compares facts gathered during the site visit with the information gathered during the pre-inspection review. If necessary, the inspector re-reviews specific documents in order to identify and classify any violations. If more information is required from the facility, the inspector requests that information pursuant to the Arkansas Hazardous Waste Management Act. After all pertinent information has been considered and documented, the inspector prepares a final report.

ENFORCEMENT ACTIONS

The second phase of the compliance monitoring and enforcement program involves taking enforcement actions to bring handlers into compliance with applicable Subtitle C regulations. The goal of enforcement actions is to compel:

1) Proper handling of hazardous waste

2) Compliance with RCRA's recordkeeping and reporting requirements

3) Monitoring and corrective action in response to releases of hazardous and nonhazardous waste, and hazardous constituents.

Once the inspection or investigation report has been prepared, the inspector, with consultation with the Inspector Supervisor, determines the existence, nature, extent, and classification of any violations. The *RCRA Enforcement Response Policy* and the *RCRA Enforcement Priority Classification Scheme* are used as guidelines for assigning the violation class. This classification is formalized in the annual State/EPA Enforcement Memorandum of Understanding (MOU).

Once a violation has been identified, all communications and actions taken by the inspector or case development worker are documented. These include:

- o Inspections and investigations
- o Telephone calls
- o Meeting notes
- o Complaints
- o Correspondence.

Advice and actions by case development workers is limited to the scope of that individual's position. Legal and technical information requests are forwarded to the proper branch or division.

Violators are classified into three groups:

1) High Priority Violators (HPVs), those who have caused actual exposure or a substantial likelihood of

exposure to hazardous wastes and substances, are chronic and/or recalcitrant violators, deviate from the terms of a permit, or substantially deviate from statutory or regulatory requirements;

2) Medium Priority Violators (MPV's), those who have one or more Class I violations and do not meet the criteria for an HPV, or those with only Class II violations for whom the compliance officer believes an administrative order is the appropriate response; and

3) Other Violators, those who have only Class II violations and are not and HPV or MPV.

Specific criteria for Class I and II violations, and for HPVs, MPVs, and LPVs is documented contained in the annual Enforcement Memorandum of Understanding.

The Inspector Supervisor, in coordination with the Enforcement Branch Manager, determines the appropriate enforcement response in accordance with established procedures and policy. There are three levels of enforcement, listed in ascending order of escalation:

1) Compliance letter, issued by the inspector;

2) Issuance of a formal action, pursuant to a Notice of Violation or Consent Administrative Order, initiated by the Enforcement Branch Manager in accordance with established procedures;

3) Civil or criminal prosecution in court, initiated by the Legal Division or local prosecuting attorney.

ADPC&E's normal response to any violation is the issuance of a compliance letter notifying the facility or generator that he is in violation of specific state or federal requirements. Formal action in the form of a consent administrative order (CAO) is then initiated against HPV's and some MPV's. Initiation of the CAO in lieu of a Notice of Violation (NOV) has caused problems in meeting EPA's criteria for timely enforcement because of the lengthy negotiations involved; but in the Department's experience this policy results in a facility's quicker return to actual compliance.

The Arkansas Hazardous Waste Management Act provides civil penalties for violations of the Act or Regulation No. 23 in amounts of up to $25,000 per day of violation; each succeeding day on which a violation continues constitutes a separate violation.

Criminal Enforcement

Recent legislation has been passed (Act 1057 of 1991) authorizing the Department to seek criminal enforcement and penalties; and provides for fines of up to $250,000 and imprisonment for up to 20 years for certain violations (A.C.A. 8-7-204(a), as amended).

A criminal action initiated by the State can result in the imposition of fines or imprisonment. Seven acts identified in the Hazardous Waste Management Act are subject to criminal action and carry criminal penalties. The penalties range from a fine of $250,000 or a prison sentence of up to twenty years. Criminal actions are usually reserved for only the most serious violations.

Stated briefly, these acts are knowingly:

- Transporting waste to a non-permitted facility

- Treating, storing, or disposing of waste without a permit or in violation of a material condition of a permit or interim status standard

- Omitting important information from, or making a false statement in a label, manifest, report, permit, or compliance document

- Generating, storing, treating, or disposing of waste without complying with the Hazardous Waste Management Act's recordkeeping and reporting requirements

- Transporting waste without a manifest or permit

- Exporting a waste without the consent of the receiving country.

The seventh criminal act is the knowing transportation, treatment, storage, disposal, or export of any hazardous waste in such a way that another person is placed in imminent danger of death or serious bodily injury. This act carries a possible penalty of up to $250,000 or 20 years in prison for an individual or a $1,000,000 fine for a corporation.

ENFORCEMENT AT FEDERAL FACILITIES

In most instances, Federal facilities are required to comply with environmental statutes to the same extent as non-Federal facilities. However, enforcing compliance under RCRA is different at Federal facilities. EPA may only issue Section 3008(h) corrective action orders at Federal facilities; no other orders may be used. The Department, however, may utilize the full range of its enforcement authorities at Federal facilities.

When a Federal facility is out of compliance with the RCRA regulations, the Department issues a notice of non-compliance, outlining violations at the facility and continuing a compliance schedule, and a timetable for regaining compliance with RCRA. After the notice of non-compliance has been issued, ADPC&E and the Federal facility will negotiate an agreement outlining the steps to bring the facility back into compliance.

In cases where corrective action is required at a Federal facility, ADPC&E may issue either a Consent Administrative Order for corrective action or a permit schedule of compliance to achieve compliance with the corrective action requirements. As with non-Federal facilities, the choice of using an order or a permit to secure corrective action at facilities seeking permits is made on a case-by-case basis.

Waste management activities at Federal facilities will often be managed by a private contractor. In this case, both EPA and the Department have full authority to take enforcement activities against the contractor for violations of RCRA or the Hazrdous Waste Management Act.

Notice of Enforcement Actions

Notice Required

Public notice must be provided for all enforcement actions (e.g., Notices of Violation, Consent Administrative Orders, and emergency orders) containing civil penalties, including in-kind services, upon the Director's signature on the order. Pursuant to the provisions of Act 163 of 1993, notice is not required for draft documents, Administrative Orders (as these are always preceded by an NOV) or enforcement orders which contain no monetary penalties. In the interim, as a matter of policy, all enforcement orders will go to public notice. The notices will be sent to the Commissioners and published on or about the tenth day of each month.

Contents of Notice

The notice must contain the following:: 1) the identity of the person or facility alleged to be in violation 2) the location by city or county of the alleged violation 3) a brief description by environmental media

(i.e. water, air, solid waste, hazardous waste) impacted by the alleged violation 4) the type of administrative action proposed (i.e. consent administrative order, notice of violation, or emergency order) and 5) the amount of the penalty to be assessed.

Effective Date of Consent Administrative Orders

A Consent Administrative Order containing a civil penalty is effective thirty (30) days after publication of the notice. However, a corrective action may be required to be taken immediately by stating in the enforcement order that such shall be taken immediately notwithstanding public notice requirements. A Consent Administrative Order containing only corrective actions is effective upon the Director's signature.

Standing to Appeal

In order to preserve the right to file a request for a hearing on a CAO or to intervene in an action on an NOV, a person must comment on a proposed penalty during the 30-day public comment period which follows publication of notice. Although Act 163 does not contain a requirement for a responsiveness summary in enforcement actions, each Division shall prepare a response to public comments as soon as practicable. If no hearing is to be held - that is, if a CAO is involved - any person who commented on the proposed CAO may petition the Commission to set aside the order and provide a hearing. This petition must be filed within thirty days after the order is effective, i.e., sixty days after the notice is published, and it is heard by the Commission rather than a hearing officer. As a practical matter, any person who desires a hearing on a CAO must file a petition for such hearing regardless of the Department's response to public comments. In order to obtain a hearing on the CAO, the petitioner must present material evidence that was not considered in the issuance of the order, and the Commission must find that in light of the new evidence the order is not reasonable and appropriate. If the Commission denies the request for a hearing, it must give notice to the petitioner and state its reasons for the denial. That denial is appealable to court. In addition, the Commission may on its own initiative institute review of any enforcement action, but it must do so within thirty days of the effective date of such order. These public notice requirements will assure that our CAOs constitute diligent prosecution by the state agency for purposes of citizen suits under the Clean Water Act and other similar laws. None of these notice provisions apply to (1) criminal actions (2) actions filed directly in court, and (3) actions for recovery of fees where no additional penalty is sought.

STAFFING AND FUNDING RESOURCES (271.6(b))

The Arkansas Department of Pollution Control and Ecology is organized by functional area and environmental media. The organization chart at TAB A, Figure 1 represents the Department's overall structure and functional areas.

The Hazardous Waste Management program is administered by the Department's Hazardous Waste Division, and incorporates not only the state's equivalent of the RCRA program, but a hazardous substance site remedial action program similar to the federal Superfund program. Administration of the RCRA portion of the Arkansas Hazardous Waste Management Program involves approximately $3.2 million annually, and 30 man-years of effort. No separate estimate is made of the cost of implementing the revisions in this application alone.

The Hazardous Waste Division of ADPC&E administers the State's hazardous waste program under authority of the Arkansas Hazardous Waste Management Act, the Resource Recovery Act, the Emergency Response Fund Act, the Remedial Action Trust Fund Act, and Regulation No. 23 (Hazardous Waste Management) . The Hazardous Waste Division has primary responsibility within ADPC&E for administering the hazardous waste permitting and enforcement authority delegated by EPA under RCRA. The Division additionally is responsible for the Department's hazardous waste cleanup activities under the Federal "Superfund" act and the corresponding State statutes.

Staffing Resources:

Hazardous Waste Division staffing levels are discussed earlier in this program description. Additional technical support rendered by the Department under "Department overhead" include those listed below.

Full-time personnel resources provided by Technical Services Division include two Chemist II positions (1 currently unfilled). This position analyzes samples and reports findings, performs verification and analysis of chemical substances, and provides testimony in enforcement litigation as required. This position contributes 2.0 workyears to the RCRA program, and is funded through indirect cost provisions in federal grants.

Legal support is provided by the Department's Legal Services Division. Responsibilities include legal counsel on RCRA matters, conducting hearings, initiating and prosecuting administrative and civil enforcement actions in accordance with Departmental policies, and final coordination of the legal portion of authorization applications. Legal counsel also coordinates with and supports local prosecuting attorneys in pursuing criminal prosecution of environmental crimes. Resources dedicated to meeting these responsibilities average 1.5 workyears by staff attorneys.

Other support positions for the RCRA program consist of a number of positions within the Department. These resources are funded through Departmental funds and the indirect cost rate applied to direct RCRA program personnel costs. These positions include the Director, Deputy Director, Fiscal Officer, computer services and support, public information, Central Records, and Management Services staffs. The support positions listed above contribute a total of approximately three workyears annually to the RCRA program.

Resources Necessary to Administer More Stringent State Requirements

Broadened state RCRA program requirements impact resources in three areas: the manifest system requirements for small quantity and conditionally exempt generators and PCB wastes; operator certification for commercial hazardous waste management facilities, and annual versus biennial reporting requirements.

Additional state manifesting and annual report requirements generate 1.3 additional workyears annually, divided among the manifest coordinator, RCRIS coordinator, data entry personnel, and the data management coordinator. Funding for these additional activities is provided from Departmental resources.

The operator certification process uses existing Division staff resources, and requires approximately 0.1 manyears or less annually. This activity is accomplished using state funds.

Funding Resources:

The ADPC&E budget for the hazardous waste management program is funded by four sources:

- o Federal grants;
- o Permit and closure plan fees;
- o an annual hazardous waste monitoring and inspection fee
- o State general revenues.

The Hazardous Waste Division and its programs are primarily self-funded; the Division receives little funding from State general revenues. In FY 92, the funding ratio is approximately 60% from Federal grants and 40% from ADPC&E matching monies, derived from State fees.

Under Arkansas law, no legislative appropriation may be for a period of more than two years. ADPC&E, therefore, prepares a biennial budget for submission to the General Assembly prior to each legislative session. This budget addresses funding necessary for operations during the next two years, with a forecast of funding

needs anticipated for the following biennium.

The Division's long range budget for 1991-1995 is enclosed at Table I, and reflects combined costs for the RCRA and site remedial action programs.

Funding Resources

Total annual operating costs of the state hazardous waste management program at the fully authorized staffing level are projected at $1,480,000 for FY 95 and $1,520,000 for FY 96. Income from the federal §3011 RCRA Cooperative Agreement has remained fixed at $908,754 for the past two years, and is expected to remain consistent over the next biennium.

Using the fee schedule as finalized in the April, 1994 revision to ADPC&E Regulation No. 23, the existing universe of 694 handlers and 200 transporters subject to the hazardous waste fee schedule, and the reported waste generation for 1991 as a baseline year, the Hazardous Waste Division has calculated the projected income listed below:

Fee Category	Subtotals	Totals Before Fee Cap	Totals After Fee Cap
TSDF Base Application Fees	$325,000.00		
TSDF Waste Management Activity Fees	$446,481.25		
TSDF Annual Permit Evaluation Fees	$330,000.00		
		$1,101,481.25	$1,013,770.25
Transporter Initial Application Fees	$20,000.00		
Transporter Renewal/Modification Fees	$56,000.00		
		$76,000.00	$76,000.00
Hazardous Waste Operator Certification Fees	$450.00	$450.00	$450.00
Commercial TSDF Monitoring/Inspection Fees	$14,000.00		
Noncommercial TSDF Monitoring/Inspection Fees	$28,500.00		

Generator Monitoring/Inspection Fees, Category 1			$46,000.00		
Generator Monitoring/Inspection Fees, Category 2			$69,000.00		
Generator Monitoring/Inspection Fees, Category 3			$75,000.00		
Transfer Facility Monitoring/Inspection Fee			$750.00		
				$233,250.00	$233,250.00
			Grand Total:	$1,411,181.25	$1,323,470.25

The above estimate does not include income derived from closure plan fees, corrective action document review, or unsolicited application amendments.

As shown below, the new increased fee schedule is sufficient to fund the hazardous waste program at its currently authorized/projected staffing levels, but does not entirely support major increases in Department staff beyond that which is currently projected, nor any major upgrades or acquisition of equipment absent any increase in the level of Federal funding for newly authorized portions of the program.

		FY 95	FY96
State Fee Funding		$1,323,470	$1,323,470
Federal 3011 Grant		$908,000.	$908,000.
Projected Income		$2,231,470.	$2,231,470
Projected HW Budget		$1,478,000	$1,514,139
	Remainder	$753,470	$717,331
Department Overhead		$663,200	$682,900
	Remainder	$90,270	$34,431

Program Costs

The major recurring costs of the RCRA program are for personnel salaries and benefits. Salary costs, in turn, generate significant indirect charges to proposed grants. Travel, training, and operating supply costs are relatively stable, while equipment costs vary widely from year to year.

RCRA program costs are divided into direct and indirect charges to the federal grants. Direct costs consist of salaries and benefits for those individuals directly implementing the State program, travel and training expenses, equipment cost, and operating supplies. Indirect charges account for support to the program provided by the department outside the Hazardous Waste Division, e.g. Department administration, laboratory support and analyses, legal support and services, central records and files maintenance, vehicle operations and maintenance, and building rent, maintenance, and utilities. Indirect charges have been negotiated with EPA at a flat rate of 64.48% of program personnel wages.

RCRA program personnel annual costs are itemized by salary, fringe benefit, and indirect cost for each position at Table II. This table includes positions addressed above which have been author-ized, but are not yet filled due to funding or hiring freeze constraints. Costs are based on the FY 92 base year, and increase annually based on a 5.0% increase in base salaries.

Equipment and supply costs fluctuate from budget year to budget year. Supplies remain stable, at approximately 4,000 annually. In the 1991 RCRA core grant, the Hazardous Waste Division signif-icantly upgraded its personnel safety, site inspection and survey, and information handling and processing capabilities with the acquisition of organic vapor analyzers, additional sampling equipment, and several personal computers. The major equipment needs foreseen for the next 2-3 years include a gas chromatograph/ mass spectrometer ($135,000) and an inductively coupled argon plasma (ICP) spectrometer ($120,000) to improve the department's ability to process a large increase in sampling and environmental analyses brought on by introduction of the toxicity characteristic rule, implementation of an electronic data interchange system to speed the review and data entry of manifests and annual reports ($20,000), acquisition of a VAX server to support and improve data processing and management ($15,000), and one or more additional vehicles to support additional inspectors and compliance monitoring workloads. Use of electronic data interchange alone is predicted to eliminate approximately two manyears ($40,250) annually in personnel costs to the RCRA program.

Estimated costs for the Authorized portion of the State RCRA Program are tabulated below:

	PROJECTED COSTS - AUTHORIZED RCRA PROGRAM					
		Man				
	Hourly	Annual	Yrs	FY 94	FY 95	FY 96
Division Chief	$20.20	$42,016.00	0.75	$31,512.00	$32,299.80	$33,107.30
Admin Asst II	$9.05	$18,824.00	0.85	$16,000.40	$16,400.41	$16,810.42
Engineer Supervisor	$17.74	$36,899.20	0.90	$33,209.28	$34,039.51	$34,890.50

Engineer PE		$16.30	$33,904.00	0.90	$30,513.60	$31,276.44	$32,058.35
Engineer II		$17.25	$35,880.00	0.90	$32,292.00	$33,099.30	$33,926.78
Engineer II		$18.12	$37,689.60	0.90	$33,920.64	$34,768.66	$35,637.87
Engineer II		$18.12	$37,689.60	0.90	$33,920.64	$34,768.66	$35,637.87
Enforcement Manager		$12.67	$26,353.60	1.00	$26,353.60	$27,012.44	$27,687.75
Inspector Supervisor		$19.66	$40,901.12	0.95	$38,856.06	$39,827.47	$40,823.15
HW Inspector		$12.22	$25,417.60	0.95	$24,146.72	$24,750.39	$25,369.15
HW Inspector		$11.80	$24,544.00	0.95	$23,316.80	$23,899.72	$24,497.21
HW Inspector		$10.97	$22,817.60	0.95	$21,676.72	$22,218.64	$22,774.10
HW Inspector		$10.97	$22,817.60	0.95	$21,676.72	$22,218.64	$22,774.10
HW Inspector		$10.97	$22,817.60	0.95	$21,676.72	$22,218.64	$22,774.10
Enf Coordinator		$8.45	$17,576.00	0.95	$16,697.20	$17,114.63	$17,542.50
Geology Supervisor		$15.26	$31,732.48	0.80	$25,385.98	$26,020.63	$26,671.15
Sr Geologist		$12.35	$25,683.84	0.90	$23,115.46	$23,693.34	$24,285.68
Sr Geologist		$11.65	$24,240.32	0.90	$21,816.29	$22,361.70	$22,920.74
Geologist II		$9.78	$20,332.00	0.50	$10,166.00	$10,420.15	$10,680.65
Geologist II		$9.78	$20,332.00	0.50	$10,166.00	$10,420.15	$10,680.65

Programs Branch Mgr		$12.43	$25,846.08	0.90	$23,261.47	$23,843.01	$24,439.08
Data Mgt Coordinator		$11.68	$24,298.56	0.90	$21,868.70	$22,415.42	$22,975.81
RCRIS Coordinator		$10.73	$22,310.08	1.00	$22,310.08	$22,867.83	$23,439.53
Transp. Coordinator		$9.05	$18,824.00	0.40	$7,529.60	$7,717.84	$7,910.79
Manifest Coordinator		$7.94	$16,521.44	1.00	$16,521.44	$16,934.48	$17,357.84
Computer Operator		$6.17	$12,827.36	1.00	$12,827.36	$13,148.04	$13,476.75
Computer Operator		$6.17	$12,827.36	1.00	$12,827.36	$13,148.04	$13,476.75
Planning Specialist		$15.40	$32,023.68	0.90	$28,821.31	$29,541.84	$30,280.39
Secretary II		$6.99	$14,543.36	0.75	$10,907.52	$11,180.21	$11,459.71
Secretary II		$7.17	$14,905.28	0.75	$11,178.96	$11,458.43	$11,744.89
TOTAL SALARY COSTS			$763,395.36	26	$664,472.64	$681,084.46	$698,111.00
FRINGE BENEFITS					$156,151.07	$160,054.85	$164,056.22
DEPT. OVERHEAD					$380,477.03	$389,988.96	$399,738.68
TRAVEL					$30,000.00	$30,000.00	$30,000.00
CONTRACTUAL					$12,000.00	$12,000.00	$12,500.00

EQUIP MENT						$23,000.00	$23,000.00	$23,000.00
TOTAL						$1,266,100	$1,296,128	$1,327,406

Restrictions on Funding

The Arkansas Constitution of 1874 prohibits the state government from deficit spending. The Arkansas General Assembly normally meets only for sixty days every other year (in the odd year) to consider appropriations and other legislation. A legislative appropriation is required prior to the Department committing or obligating any funds, to include funds derived from fee collection or Federal grants. Even if funds are on hand, they may sometimes not be able to be committed due to lack of sufficient approp-riation. The Department must then defer these expenditures until the next budget period, provided funds remain available, or seek a supplemental appropriation from the General Assembly or the Legislative Council. While achieving its aim of preventing state budget deficits, this provision sometimes results in the Department's having to defer hiring new or replacing personnel or purchasing equipment even though funds are on hand for a particular project or activity.

Significant impacts to the State Program because of Federal authorization for the Land Disposal Restriction revisions, small quantity generator rules, revised burning and blending rules, and the waste fuel and oil rules are not anticipated due to the nature of the hazardous waste universe in Arkansas. These rules have been implemented by incorporation into the existing framework of the program and application of established procedures.

Implementation of the corrective action portion of the HSWA without additional staffing and financial resources will significantly affect the effectiveness of Arkansas' Hazardous Waste Program. These additional resources have been appropriated , based on budget projections, by the Arkansas General Assembly in order to implement the HSWA program components. The corrective action have been integrated into and will be implemented through a priority action process addressed in program-specific documents such as the Multi-Year Permitting Strategy, the RCRA Enforcement Memorandum of Understanding, and the annual cooperative agreement workplan.

ESTIMATE OF ACTIVITIES SUBJECT TO REGULATION

Arkansas oversees a hazardous waste universe of 2,546 hazardous waste "handlers". The number of generators and TSD facilities in Arkansas is tabulated below:

Conditionally Exempt Small Quantity Generators: 621

Small Quantity Generators: 817

Generators: 298

Treatment, Storage, and Disposal Facilities: 30

Transporters: 79

PERMITTED TREATMENT, STORAGE, AND DISPOSAL FACILITIES:

Arkansas has a universe of 30 facilities requiring a RCRA/HSWA permit, and has issued a total of 13 final permits. These are summarized as follows:

FINAL PERMITS	INTERIM STATUS
Arkansas Eastman (Incinerator, S&T)	Arkansas Eastman (BIF)
AT&T (S&T)	Ash Grove Cement (BIF, S&T)
Atlantic Research (S&T)	Austin Powder (S&T)
Dow Chemical (PC)	Ethyl Chemical (BIF, S&T)
ENSCO (Incinerator, PC, S&T)	Koppers Industries (S&T, PC)
Fordyce Wood Preserving (PC)	Loral (S&T)
Great Lakes Chemical (PC, S&T)	Maybelline (BIF, denied, in closure)
Lion Oil (PC)	Remington Arms (PC, S&T)
Safety-Kleen, Little Rock (S&T)	Reynolds Metals (Incinerator)
Safety-Kleen, Fort Smith (S&T)	Rineco Chemical (S&T)
Sentinel Wood Preserving (PC)	Sporting Goods Properties
U.S. EPA Incineration Research Facility (Incinerator)	Tracor (S&T)
U.S. Army Pine Bluff Arsenal (Landfill, PC, S&T)	USAF Eaker Air Force Base (S&T, denied, closing)
	U.S. Army Fort Chaffee (S&T)
	Weyerhaeuser Company (PC, S&T)
	MacMillan Ring-Free Oil (going to Superfund)
	Mountain Pine Wood Treaters (Superfund)

In Calendar Year 1991, Arkansas handled the quantities of hazardous wastes from sources tabulated in the following Tables 1-3, as outlined in the State's 1993 Capacity Assurance Plan:

Table 1:
1991 Hazardous Waste Generated and Managed On Site (tons)
ARKANSAS

CAP Management Category	Waste Managed On Site
RECOVERY[a]	
Metals Recovery	0
Inorganics Recovery	0
Organics Recovery	114.447
Energy Recovery - Liquids	3,125.263
Energy Recovery - Sludges/Solids	10.700
TREATMENT[a]	
Stabilization/Chemical Fixation	0
Incineration - Liquids and Gases	7,780.550
Incineration - Sludges/Solids	165.273
Fuel Blending	0
Hazardous Wastewaters and Sludges Treatment	142,534.448
DISPOSAL	
Landfill	0
Deepwell/Underground Injection	618,599.200
Land Treatment/Farming	0
TRANSFER/STORAGE	
Transfer/Storage	

[a] Data may not be complete for these technologies because facilities are not required to report in the 1991 Biennial Report waste managed in exempt processes.

Table 2:
1991 Management of Hazardous Waste in Captive Systems (tons)
ARKANSAS

CAP Management Category	Exports	Waste Generated and Managed In State	Imports
RECOVERY			
Metals Recovery	0	0	0
Inorganics Recovery	0	0	0
Organics Recovery	2,072.050	185.470	0
Energy Recovery - Liquids	0	0	0
Energy Recovery - Sludges/Solids	0	0	0
TREATMENT			
Stabilization/Chemical Fixation	0.073	0	0
Incineration - Liquids and Gases	508.700	0	0
Incineration - Sludges/Solids	0	181.282	0
Fuel Blending	0	0	0
Hazardous Wastewaters and Sludges Treatment	48.000	0	1.103
DISPOSAL			
Landfill	0	0	0
Deepwell/Underground Injection	0	0	0
Land Treatment/Farming	0	0	0
TRANSFER/STORAGE			
Transfer/Storage	33.547		

Table 3:
1991 Management of Hazardous Waste in Commercial Systems (tons)
ARKANSAS

CAP Management Category	Exports		Waste Generated and Managed In State		Imports[a]
	Recurrent	One-time	Recurrent	One-time	
RECOVERY					
Metals Recovery	17,995.245	0.200	0	0	0
Inorganics Recovery	333.165	0	0	0	0
Organics Recovery	1,699.183	0	105.557	0	431.237
Energy Recovery - Liquids	6.635.001	2.477	12,558.010	11.472	0
Energy Recovery - Sludges/Solids	35.718	0	0	0	55,898.890
TREATMENT					
Stabilization/Chemical Fixation	1,049.501	0	0	0	0
Incineration - Liquids and Gases	356.898	1.970	534.080	0	12.144.086
Incineration - Sludges/Solids	404.768	0.075	92.444	16.884	28735.820
Fuel Blending	9,108.404	204.284	470.234	0	20,207.937
Hazardous Wastewaters and Sludges Treatment	602.157	3.729	0	0	0
DISPOSAL					
Landfill	55,186.401	2528.389	0	0	0
Deepwell/Underground Injection	5,516.357	0	0	0	0
Land Treatment/ Farming	1,403.550	0	0	0	0
TRANSFER/STORAGE					
Transfer/Storage	0	0			

[a] Imports cannot be divided into recurrent and one-time wastes due to limitations of information provided on Biennial Report WR forms.

NARRATIVE DESCRIPTION OF THE SCOPE, STRUCTURE, COVERAGE, AND PROCESSES OF THE STATE PROGRAM REVISION (RCRA 271.6(a))

RCRA CLUSTER II

1. Revision Checklist 92: *Wood Preserving Listings; Technical Corrections*

Date: July 1, 1991
Reference: 56 FR 30192-30198

Arkansas has adopted and incorporated by reference these technical corrections amending a final rule promulgated December 9, 1990 (55 FR 50450) that added three categories of wastes generated from wood preserving processes, F032, F034, and F035, to the list of hazardous wastes from non-specific sources. Arkansas did not adopt the administrative stay concerning the implementation of protective coatings on drip pads, and subsequently adopted more stringent state requirements requiring that wood preserving facilities upgrade their drip pads to meet EPA's ultimate construction standards by September 30, 1995. State provisions are more stringent than the federal rule.

2. Revision Checklist 94: *Burning of Hazardous Waste in Boilers and Industrial Furnaces; Corrections and Technical Amendments I*

Date: July 17, 1991
Reference: 56 FR 32688-32886

On February 21, 1991 (56 FR 7134), EPA published a final rule to regulate air emissions from the burning of hazardous waste in boilers and industrial furnaces. Arkansas has adopted and incorporated by reference this July 17, 1991 federal rule corrects numerous typographical and editorial errors that appeared in the February 21, 1991 regulatory text, including corrections to Appendices II and III. This rule also added two appendices, Appendix IX and Appendix X to Part 266. State provisions are equivalent to the federal rule.

3. Revision Checklist 95: *Land Disposal Restrictions for Electric Arc Furnace Dust (K061)*

Date: August 19, 1991
Reference: 56 FR 41164-41178

On August 17, 1988 (53 FR 31138), the EPA first promulgated treatment standards for two nonwastewater subcategories of K061; namely the low zinc subcategory (less than 15% total zinc) and the high zinc subcategory (equal to or greater than 15% total zinc). Arkansas has adopted and incorporated by reference this August 19, 1991 federal rule revising and finalizing treatment standards under the land disposal restrictions (LDR) program for K061 nonwastewaters in the high zinc subcategory. This rule also finalizes a generic exclusion from the derived-from-rule for K061 nonwastewater residues if: (1) they are generated from the high temperature metals recovery (HTMR) process, (2) they meet the generic exclusion levels for all constituents, (3) they are disposed of in a Subtitle D unit, and (4) they exhibit no hazardous waste characteristic. Finally, this rule finalizes an exclusion from classification as a solid waste under 40 CFR 261.4(a) for K061 HTMR splash condenser dross residue. State requirements are equivalent to the federal rule.

4. Revision Checklist 96: *Burning of Hazardous Waste in Boilers and Industrial Furnaces; Technical Amendments II*

Date: August 27, 1991
Reference: 56 FR 42504-42517

Arkansas has adopted and incorporated by reference this *Federal Register* notice, which makes several technical amendments to the final rule issued for boilers and industrial furnaces burning hazardous waste on February 21, 1991 (56 FR 7134). The technical amendments provide clarification of the regulation and correct unintended consequences of the February 21, 1991 rule and adds two new appendices, Appendix XI and Appendix XII to the code. The rule also corrects several errors to the technical corrections and amendments to the February 21, 1991 rule published on July 17, 1991 (56 FR 32688). State requirements are equivalent to the federal rule

5. Revision Checklist 97: *Exports of Hazardous Waste; Technical Correction*

Date: September 4, 1991
Reference: 56 FR 43704-43705

On August 8, 1986 (51 FR 28664), EPA promulgated a final rule addressing exports of hazardous waste. Section 262.53 of these regulations requires, among other things, that exporters send to EPA's Office of International Activities advance written notification of their plans to export hazardous waste. Section 262.56 also required that the annual reports regarding exports must be sent to this same office. In addition, a "note" at the conclusion of 270.10(e)(2) designates the Office of International Activities as the recipient of export notifications required under 262.53. Arkansas has adopted and incorporated by reference the technical corrections addressed by this final rule providing that such notifications and annual reports must henceforth be sent to EPA's Office of Waste Programs Enforcement because the administrative responsibilities of the Office of International Activities have been transferred to that office. Copies of these export notifications must also be submitted to the Director. State provisions are equivalent to the federal rule.

6. Revision Checklist 98: *Burning of Hazardous Waste in Boilers and Industrial Furnaces: Administrative Stay of Applicability and Technical Amendment*

Date: September 5, 1991
Reference: 56 FR 43874-43877

Arkansas has adopted and incorporated by reference this *Federal Register* notice, which administratively stays the permitting standards for boilers and industrial furnaces adopted pursuant to the February 21, 1991 (56 FR 7134) final rule as it applies to coke ovens burning certain hazardous wastes from coke by-products recovery process. The primary effect of the stay is to halt the application of industrial furnace standards to coke ovens when they reprocess non-K087 hazardous wastes while the EPA can evaluate comments on a pending regulatory proposal to exclude certain wastes from Subtitle C jurisdiction when recycled by reprocessing in coke ovens. This means that on August 21, 1991, coke ovens may continue to process residues from the byproducts recovery process that exhibit the TC without the coke oven having to comply with the boilers and industrial furnaces (BIF) regulations. State requirements are equivalent to the federal rule.

7. Revision Checklist 99: *Amendments to Interim Status Standards for Downgradient Ground-Water Monitoring Well Locations at Hazardous Waste Facilities*

Date: December 23, 1991
Reference: 56 FR 66365

Arkansas has adopted and incorporated by reference this rule, which promulgates requirements allowing facilities

to install alternate ground-water monitoring wells in certain circumstances where existing physical obstacles cannot be avoided. The owner/operator must demonstrate that the alternate location will meet the criteria specified at 40 CFR 265.91(a)(3). The demonstration must be certified by a qualified ground-water scientist as defined in 40 CFR 260.10. State provisions are equivalent to the federal rule.

8. Revision Checklist 100: *Liners and Leak Detection Systems for Hazardous Waste Land Disposal Units*

Date: January 29, 1992
Reference: 57 FR 3462

Arkansas has adopted and incorporated by reference this rule, which is an amendment concerning liner and leachate collection and removal systems for hazardous waste surface impoundments, landfills, and waste piles. The rule also adds new regulations requiring owners and operators of hazardous waste surface impoundments, waste piles, and landfills to install and operate leak detection systems at such time as these units are added, laterally expanded, or replaced. State provisions are equivalent to the federal rule.

9. Revision Checklist 101: *Wood Preserving; Standards and Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities*

Date: February 18, 1992
Reference: 57 FR 5859

This rule announced an administrative stay of the requirements for drip pad coatings, sealers, or covers for existing drip pads at wood preserving plants. The effect of the stay was to extend the effective date of coating, sealer, or cover requirements for existing drip pads until October 30, 1992. The Department adopted additional, more stringent standards in lieu of these requirements at Regulation 23 Sections 13a(6) and (9) These requirements are explained elsewhere in this program description. State requirements are more stringent than the federal rule.

10. Revision Checklist 102: *Land Disposal Restrictions for Third Third Scheduled Wastes*

Date: March 6, 1992
Reference: 57 FR 8086-8089

Arkansas has adopted and incorporated by reference this amendment correcting errors and clarifying the language in the preamble and regulations of the June 1, 1990 final rule for the Third Third Land Disposal Restrictions. State requirements are equivalent to the federal rule.

11. Revision Checklist 103: *Hazardous Debris Case-by-Case Capacity Variance*

Date: May 15, 1992
Reference: 57 FR 20766-20770

Arkansas has adopted and incorporated by reference this amendment establishing a case-by-case variance for the land disposal of hazardous debris pending promulgation of the final treatment standards for these wastes. State requirements are equivalent to the federal rule.

12. Revison Checklist 104: *Oil Filter Exclusion*

Date: May 20, 1992
Reference: 57 FR 21524-21534

Arkansas has adopted and incorporated by reference this amendment exempting non-terne plated oil filters from categorization of hazardous wastes provided the filters are hot-drained and contain no free liquids. State requirements are equivalent to the federal rule.

13. Revison Checklist 105: *Identification and Listing of Hazardous Waste; Exclusions*

Date: June 22, 1992
Reference: 57 FR 27880

Arkansas has adopted and incorporated by reference this rule, which amends 40 CFR 268.4(a) to exclude certain coke by-product residues which are recycled from the definition of hazardous waste. State requirements are equivalent to the federal rule.

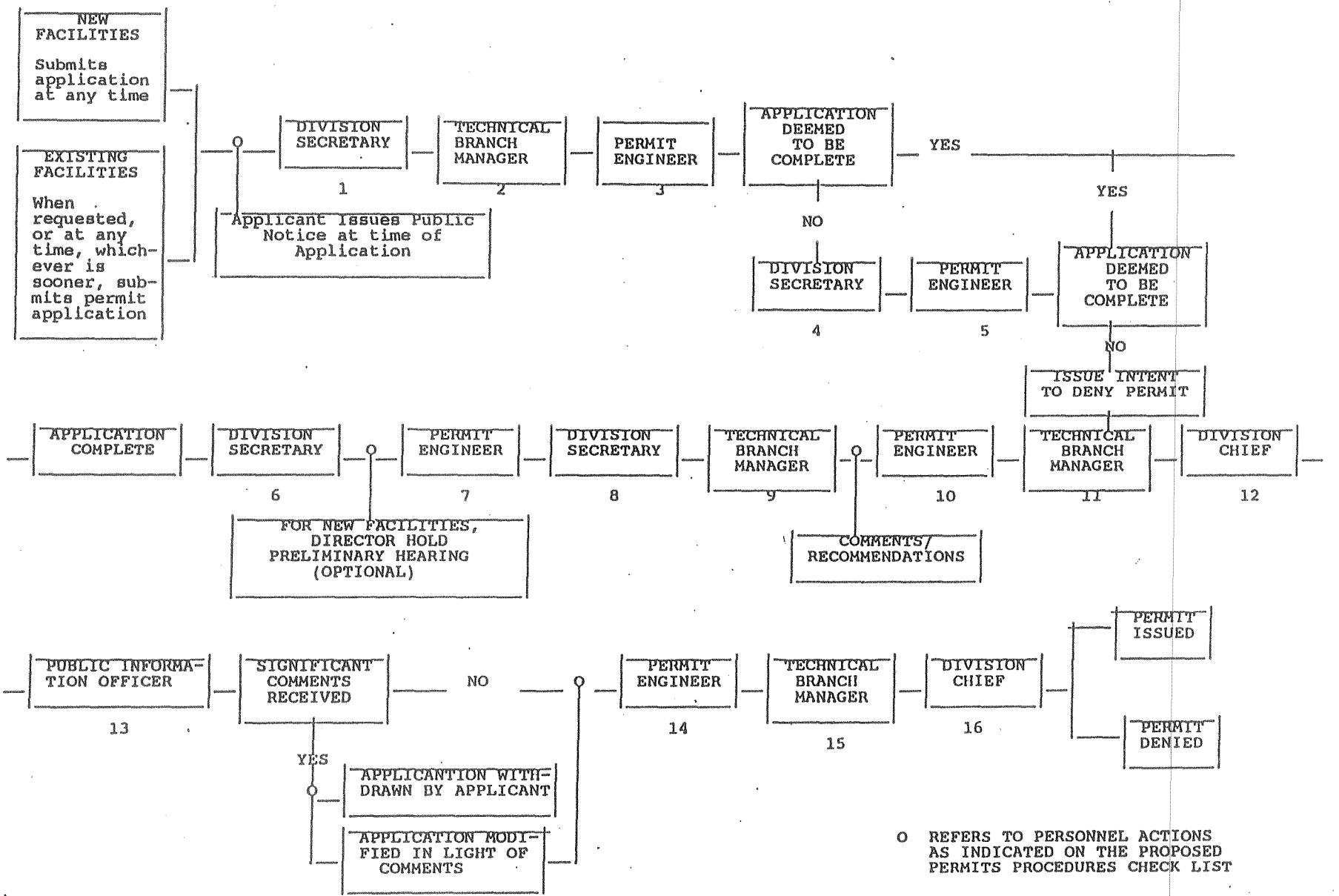
14. Revision Checklist 106: *Land Disposal Restrictions for Third Third Scheduled Wastes*

Date: June 26, 1992
Reference: 57 FR 28628

Arkansas has adopted and incorporated by reference this rule, which amends 40 CFR 268.35(c) to provide notice of case-by-case capacity variance for storage of lead-bearing hazardous materials. State requirements are equivalent to the federal rule.

ATTACHMENT 4

HAZARDOUS WASTE PERMIT FLOW DIAGRAM



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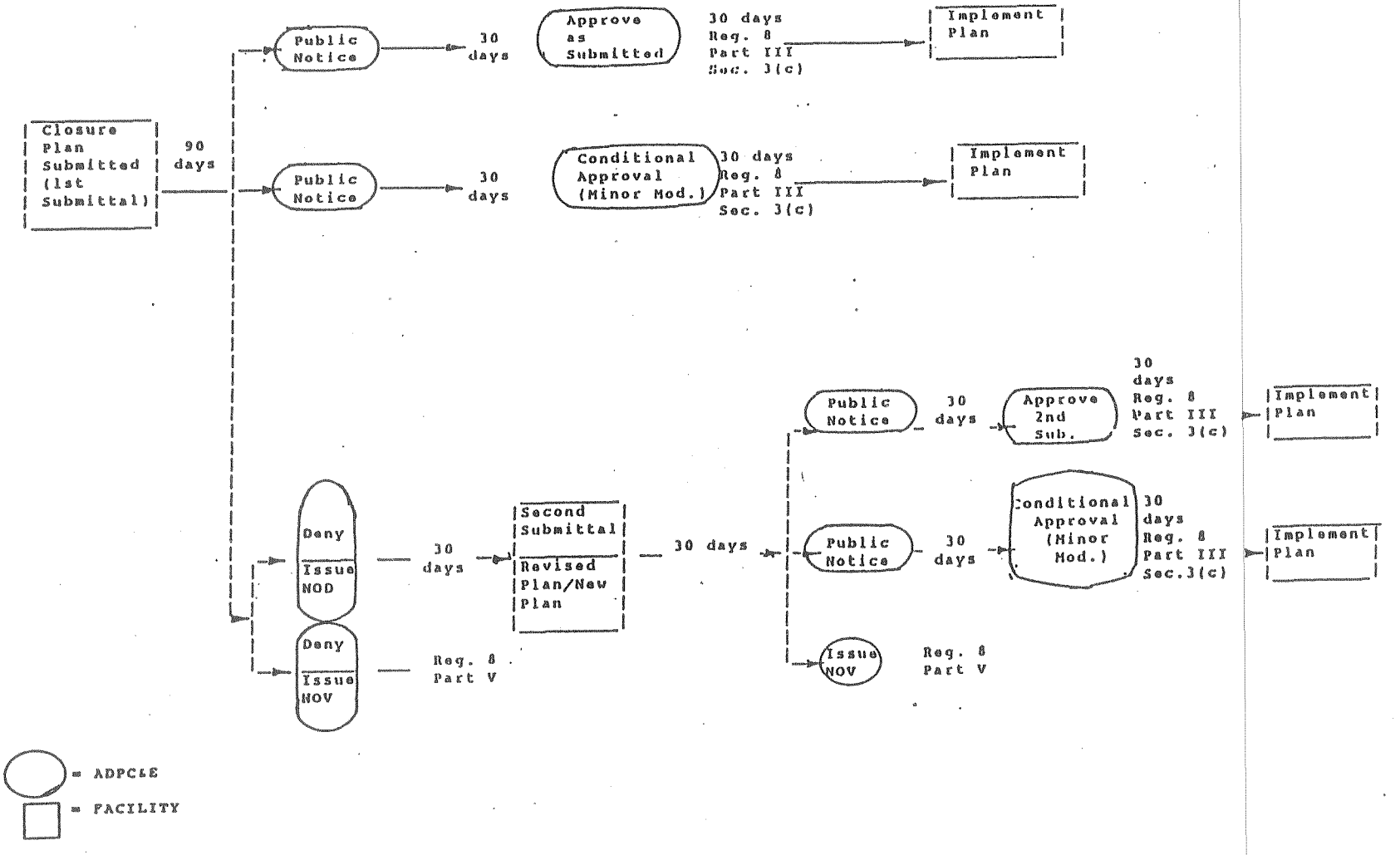
ATTACHMENT 5

PERSON/OFFICE RESPONSIBLE		ACTION	DATE ACCOMPLISHED
DIVISION SECRETARY 1	1.	Date application received	
	2.	Date Logged In	
	3.	Designated Project No. _____, CSN _____	
	4.	File established	
	5.	Letter of acknowledgement sent to applicant	
TECHNICAL BRANCH MANAGER 3	1.	Assigned _____ as project engineer	
PERMIT ENGINEER 3	1.	Reviews application for completeness	
	2.	Forwards discrepancy list to secretary	
DIVISION SECRETARY 4	1.	Sends applicant notice of deficiency, if applicable	
	2.	Receives supplemental information from applicant; forwards to project engineer	
PERMIT ENGINEER 5	1.	Reviews supplemental information and makes determination of completeness	
	2.	APPLICATION DEEMED TO BE COMPLETE	
	3.	Contacts applicant for additional technical information as required	
DIVISION SECRETARY 6	1.	Sends letter of completeness to applicant	
PERMIT ENGINEER 7	1.	Prepares draft permit, or notice of intent to deny, as applicable, and fact sheet	
	2.	Forwards draft permit, fact sheet, etc. to secretary for typing	
DIVISION SECRETARY 8	1.	Types draft permit and fact sheet	
	2.	Forwards to Technical Branch Manager	
TECHNICAL BRANCH MANAGER 9	1.	Reviews draft permit and fact sheet for adequacy of form, content and conditions	
	2.	Forwards to Permits Review Committee	
PERMIT ENGINEER 10	1.	Modifies draft permit, if required	

TECHNICAL BRANCH MANAGER 11	1.	Forwards draft permit and fact sheet to Division Chief	_____
DIVISION CHIEF 12	1.	Reviews fact sheet and draft permit for concurrence	_____
	2.	Forwards fact sheet and draft permit to Public Information Office and EPA	_____
PUBLIC INFORMATION OFFICE 13	1.	Prepares and issues Public Notice in accordance with 40 CFR 124.10	_____
	2.	Conducts Public Hearing, along with Deputy Director and Technical Branch Staff	_____
	3.	Receives all comments from interested parties	_____
	4.	Forwards public comments to permit engineer	_____
PERMIT ENGINEER 14	1.	Prepares final permit	_____
	2.	Prepares Response to Comments	_____
	3.	Forwards to Technical Branch Manager	_____
TECHNICAL BRANCH MANAGER 15	1.	Reviews responses for completeness and clarity	_____
	2.	Checks Final Permit for consistency in standards and format	_____
	3.	Forwards to Division Chief	_____
DIVISION CHIEF 16	1.	Reviews permit for final presentation of Permit to EPA for EPA's Signature	_____
	2.	Signs Joint Permit Decision after EPA signs and returns to ADPC&E	_____
	3.	Issues Final Permit and Notifies Facility	_____

ATTACHMENT 6

CLOSURE PLAN FLOW CHART
(Refer to 40 CFR 265.112(d)(4))



ATTACHMENT 7

FLOW DIAGRAM OF PUBLIC PARTICIPATION
(All Facilities)